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OBSERVATIONS

ON THE

ABUSE

OF

MEDICINE,

BY

THOMAS WITHERS, M.D.

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DR. WILLIAM CULLEN,

PROFESSOR OF MEDICINE

IN THE

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THE FOLLOWING

OBSERVATIONS

ARE,

WITH ALL RESPECT AND GRATITUDE,

INSCRIBED

BY

HIS MUCH OBLIGED

AND MOST OBEDIENT SERVANT,

THOMAS WITHERS.

ADVERTISEMENT.

THE intention of this treatiſe is to preſent to the public SOME EXAMPLES of the ABUSE of MEDICINE. The importance of the ſubject will at firſt ſight appear evident. It is cloſely connected with the art of medicine, the art of preventing and curing diſeaſes. To contribute ſomething towards the ſucceſsful practice of ſo neceſſary and uſeful a profeſſion, is the author's higheſt ambition. To determine how far he has ſucceeded in this view, he willingly ſubmits to the candid judgment of the public.

The author has enumerated inſtances of the abuſe and neglect of ſome of the moſt uſeful remedies, which have been hitherto diſcovered by experience.

The abuſes of medicine indeed are ſo very numerous and important, that great candor is requiſite to treat of them in ſuch manner as not to give offence to men of ſenſibility and judgment. Every candid perſon, engaged in the diſcuſſion of a ſubject of this nature, will with the utmoſt attention purſue that train of argument, which, without irritating the paſſions, may lead to the diſcovery of errors, with a view only to correct them.

"The author has abſtained moſt religiouſly from perſonal reflections. He has cenſured no man and therefore hopes he has offended no man." If he be found to have departed from any commonly received doctrines either of theory or of practice, which may be thought in ſome meaſure to have ſtood the teſt of time and from thence to have derived an additional authority, he has been induced to do ſo, not from the deſire of indulging an idle curioſity, nor from the illiberal motive

motive of gratifying a ſpirit of oppoſition, but from a full conviction of the inaccuracy or falſehood of ſuch doctrines.

In pointing out the abuſes of medicine, the author has firſt treated of the pernicious effects of the UNNECESSARY USE of remedies, which is univerſally admitted to be a principal ſource of diſeaſes *. He has next touched upon the NEGLECT and IMPRUDENT USE of them; a ſubject that preſents to view an extenſive field of obſervation. "He could have illuſtrated the truth of his remarks by a variety of caſes, but to enter into ſo minute a detail would he thinks be equally unneceſſary and unintereſting." After having pointed out inſtances of ſuch errors in practice, he is naturally led to mention thoſe methods of cure, which experience has proved to be the moſt ſucceſsful. To avoid the repetition of words, he has in ſeveral caſes hinted

* Gaub. Inſt. Pathol. Med. de intempeſtivo remediorum uſu, p. 242.

at the uſe only of a remedy, hoping that the neglect or imprudent application of it will eaſily be aſcertained by the reader. In ſelecting the particular inſtances of the abuſe of medicine, he has endeavored to fix upon thoſe that are general and important. He has alſo taken notice of the abuſe of certain remedies in ſeveral diſeaſes, in which the practice is either contradictory or obſcure. But though the reader may find ſome examples of the abuſe of medicine here enumerated, he will, with very little reflection and medical knowledge, be able to perceive that a multitude of abuſes yet remains unnoticed, all of which are ſerious in themſelves, but could not have been included in this eſſay without having ſwelled it to a ſize far greater than was originally intended.

The author has been cautious to make uſe of the moſt eaſy and familiar language in every part of this treatiſe, where the knowledge of what it contains might prove

prove of ſome utility to the public. Every one, not unacquainted with the firſt principles of anatomy, will, it is hoped, find no difficulty in comprehending the obſervations made on this ſubject. Perhaps too there will be ſome who, upon the principle of ſelf-preſervation, will be of opinion, that it is at leaſt an uſeful, if not a neceſſary thing to be informed how greatly the abuſe of medicine contributes to the riſe and progreſs of diſeaſes. Indeed mankind in general, as well as the practitioners of the medical art, ought equally to join their endeavors to prevent, as far as poſſible, what ſo nearly concerns them, as the abuſe of medicine. They who are poſſeſſed of the principles of humanity and a juſt feeling for the ſufferings of others, can never refuſe to take part in a cauſe ſo generally intereſting. The author has endeavored to diſcuſs the ſubject in an impartial manner, and to found his obſervations on facts aſcertained by experience.

ERRATA.

Page	*line*	*for*	*read*
18	9	is	are
22	2	of bearing	to bear
123	22	(*note*) thoraſtic	thoracic
293	8	no trecommend	not recommend

OBSERVATIONS

ON THE

ABUSE OF MEDICINE.

A

Ad utilitatem vitæ omnia consilia factaque nostra dirigenda sunt.

TACIT.

Judicio perpende, et si tibi vera videtur,
Dede manus; aut si falsa est, accingere contra.

LUCRET.

SECTION I.

OF

BLOOD-LETTING.

BLOOD-LETTING is a term comprehending "every artificial discharge of blood, made with a view to the cure or prevention of disease *." It is a remedy no less universally used, than important in its effects. Its great activity renders it dangerous when unskilfully employed. For if it be powerful in preserving life, it is also powerful in destroying it.

Blood-letting diminishes the quantity of the circulating fluids, removes plethora or the too great fulness of the vessels, and proves highly antispasmodic, by inducing a general relaxation of the vascular system, but particularly of that

* Duncan's Elem. Therap. p. 172.

part from whence the evacuation is made. It mitigates morbid heat; reduces the ſtrength and fulneſs of the pulſe; diminiſhes the tone of the moving fibres; and tends to prevent the occurrence of topical determinations of blood to particular parts, affections ſo frequent and alarming in a variety of diſorders.

After this very brief account of the general effects of blood-letting, I ſhall enumerate ſome inſtances of the abuſes to which this valuable remedy is unfortunately proſtituted through ignorance or inattention. For this purpoſe, we ſhall begin with obſerving the bad conſequences of Unneceſſary blood-letting on the general health of the conſtitution.

Nature has endowed the animal frame with the power of preparing, from proper aliment, a certain quantity of blood. This vital fluid, ſubſervient to nutrition, is, by the amazing ſtructure of the heart and blood-veſſels, circulated through the different parts of the ſyſtem. A certain natural balance between what is taken in, and what paſſes off by the ſeveral outlets of the body, is, in a ſtate of health, regularly preſerved. When this balance, ſo eſſential to life,

life, is contrary to the laws of the animal conſtitution interrupted, either a deviation from a ſound ſtate is immediately perceived, or health, from that moment, is rendered precarious. Blood-letting tends artificially to deſtroy that natural balance in the conſtitution. Nature deprived of a quantity of the circulating fluid, being fitted with means for repairing the loſs ſhe has ſuſtained, begins immediately to repair it. The ſecretions and excretions in general are diminiſhed; the appetite is encreaſed; and, for a ſhort time, the proceſs of nutrition is unuſually quick *.

Thus, by the wiſdom of Providence, nature ſoon reſtores to the conſtitution what art had taken from it. The conſequences, therefore, of having been once bled are rarely conſiderable. This ſingle operation, however, if ordered without neceſſity, was an imprudent violation of nature, and of common ſenſe.

But

* Elem. of Therapeutics, p. 173. This fact, which is admitted by all phyſiologiſts, ſhews the great wiſdom of the Creator in the ſtructure of the animal frame. It is properly referred to the vires naturæ medicatrices. It is indeed remarkable how very quickly a healthful conſtitution can repair great loſſes of blood.

But too often the practice has not reſted here. For various are the incidents which favor the repetition of blood-letting. The patient, if addicted to an eaſy, indolent, luxurious way of life, may find himſelf, after the evacuation, ſenſible of ſome preſent eaſe. The ſyſtem, being before too full of blood, enjoys a ſhort reſpite from its uſual oppreſſion.—Or, after the bleeding, though it was improper, and tended rather to encreaſe the diſeaſe, yet the hope of relief, or a change of weather, the benefit of exerciſe and country air, or ſome other alteration in an accuſtomed manner of living, may, by palliating or removing the complaint, prejudice the patient in favor of the lancet.——The diſorder, it may be, was of ſuch a kind as really to admit of alleviation from the uſe of bleeding; but, nevertheleſs, the remedy unhappily proves of worſe effect to the conſtitution than the diſeaſe itſelf would have done, though entirely left to nature.—Great numbers of people who have been relieved by bleeding, are apt to be partial to the means of their own recovery, and to become ſtrenuous advocates for its uſe, even in caſes by no means ſimilar to their own.

Theſe, and a variety of other accidental cauſes, often perſuade to repetitions of blood-letting.

letting. The conſequences now become more ſerious. The conſtitution, though it did not ſuffer materially from one injudicious bleeding, yet far from being able to undergo with impunity repeated operations of a ſimilar kind, turns againſt itſelf thoſe powers which were given for its preſervation, and co-operates with the imprudent uſe of the lancet in promoting the accompliſhment of its own deſtruction. For now the conſtitution not only repairs the loſſes of blood it ſuſtains, but, if the common intervals of time be interpoſed, makes more blood than is naturally required for the purpoſes of health and life, that it may be able to bear ſuch repeated evacuations.

Thus the habit of blood-letting is eſtabliſhed. But, in fact, habitual blood-letting augments the very evil it was intended to remove. For ſanguine evacuations neceſſitating the conſtitution to make more blood than is requiſite, produce too great fulneſs of the ſyſtem *. The balance between what is taken into

* Left. on the Mat. Med. p. 31. "On this head I may obſerve, that blood-letting has a manifeſt tendency to increaſe the quantity of the blood; and if this evacuation be repeated at ſtated times, ſuch ſymptoms of repletion and ſuch

into the body, and what paſſes off by its ſeveral out-lets, is no longer maintained. As the diſpoſition to plethora exiſts, plethora itſelf, if the perſon continue to live in his accuſtomed manner, will undoubtedly prevail, except at that time when the conſtitution has juſt received the unnatural aſſiſtance of the lancet. The habit of letting blood increaſes and becomes ſtronger by repetition. In this ſtate, the conſtitution, in ſpite of human art, will at times labour under various degrees of plethora, till the veſſels arrive at that point of fulneſs, which again creates the neceſſity of bleeding. Though ſome conſtitutions are ſo robuſt, or ſo peculiarly framed by nature, as to bear ſuch treatment, without any evident bad conſequences, yet this is but the privilege of few. Many will ſeverely ſuffer, though they themſelves may often be the firſt to extol in the higheſt terms of praiſe that very remedy, which has proved ſo pernicious to their own conſtitutions. They have been bled till ſtated bleed-

ſuch motions are excited at thoſe times as render the operation neceſſary."

Gaub. Pathol. Inſt. § 391. Conſuetudo denique mittendi ſanguinis, naturalis, artificialis, uti, reparandæ jacturæ ſtudium indit, ita reparatæ creat intolerantiam, cui moles, aliter haud gravatura, oneri eſt.

bleedings become neceſſary, not only for the ſupport of their health, but even for the preſervation of their lives. They have injudiciouſly created to themſelves the neceſſity of bleeding, and are even happy to find that it relieves complaints, which it at firſt tended to induce, and afterwards to confirm.

The effects of plethora are many and dangerous. A ſlight degree of it often produces ſtrange commotions in weak and irritable habits *. No perſon who depends for the preſervation of his health on an artificial diſcharge of blood, can ever be pronounced out of danger. Before the uſual means of relief be employed, the ſanguine fulneſs at one time or another may have proceeded to a morbid or even to a fatal length. The anticipation of the ſtated bleedings may with the greateſt inconvenience leſſen, but it can never remove the danger. An increaſe of fatneſs, unnatural heat, torpor, inactivity, and a ſenſe of laſſitude are common

* Gaub. Inſtit. Pathol. § 391. In debilibus exiguum quoque ſanguinis ſuperpondium, valentiori facile tolerandum, ſuperatis canalium viribus incommodat, & congeſtione, oppletione, eruptione gravat. Naturis irritabilibus levis humorum exceſſus pro ſtimulo eſt, cujus dum ſentiunt moleſtiam, in motus inordinatos ruunt, ut amoliantur, et ſemet ipſas, prodactis incaſſum viribus, fatigant.

effects of plethora *. The whole vaſcular ſyſtem is unnaturally put upon the ſtretch, and along with it, the nervous and muſcular fibres. Thus by ſlow degrees, the tone of the body, in conſequence of ſo conſiderable an over-diſtention, is in danger of being deſtroyed †. The conſtitution itſelf, in proportion to its native vigor, is rendered liable, excluſive of every other cauſe of diſeaſe, to break many years ſooner than it might otherwiſe have done in the common courſe of nature, if nature's laws had not been wantonly violated, or preſumptuouſly deſpiſed. Hence old age ſets in at an earlier ſeaſon, and becomes afflicted with heavier infirmities. Frequently the appetite fails, the powers of digeſtion and nutrition are impaired, the body ſhrinks, the mind becomes dejected, the ſtomach and bowels are diſordered, ſleep is interrupted and unrefreſhing, and in ſhort the whole conſtitution fundamentally ſhaken and debilitated.

Theſe

* Plenitudo quævis ad ſummum progreſſa, nec mature levata, etiam in robuſtis, ſarcina demum fit viribus major, quæ ſpontaneam laſſitudinem, ad motus torporem, ſenſumque gravitatis inducat. Gaub. Inſtit. Pathol. §. 391.

† Here it is ſuppoſed that the patient after bleeding does not prudently moderate his diet, but continues, as is commonly the caſe, to live in his uſual manner, and to ſatisfy his appetite without reſtraint.

Theſe are the ſlow and the frequent conſequences of plethora. Others in fact occur, which, though on the whole they are perhaps leſs deſtructive, are however more ſenſibly felt, becauſe they are more ſudden, or more painful, and better diſtinguiſhed.

Too great a fulneſs of blood prediſpoſes the conſtitution to a world of diſorders. Inflammatory fever and external inflammation, the phrenſy, the pleuriſy and the quinſy, rheumatiſm, hemorrhages, &c. are frequently the diſorders of a ſanguine habit, depending greatly on the plethoric ſtate *. Phyſicians likewiſe are perfectly agreed, that too great a quantity of blood, increaſing irritability, has a ſtrong tendency to excite in habits where the pre-diſpoſition to ſuch diſorders exiſts, convulſions, St. Vitus's dance †, epilepſy ‡, and hyſteric

 fits;

* Vid. Sweit. Comm. in Boerh. Aph. 729, 772, 799, 879, 1491.

† Though this diſorder ſometimes ariſes from plethora, conjoined with irritability, yet among other cauſes it frequently ariſes from irritability and weakneſs; of which I have had an opportunity of ſeeing ſeveral caſes. They were ſucceſsfully treated by reſtoring the tone and vigor of the conſtitution.

‡ Vid. Sweit. Comm. in Boerh. Aph. 1074, 1075.

fits; complaints which otherwiſe might never have made their appearance. We may further add pains of the head, vertigo, night-mare, often the forerunners of apoplexy and palſy *, which are juſtly ranked among the unhappy effects of plethora. Habitual blood-letting tends indeed particularly to bring on apoplectic and paralytic complaints. The morbid habit, acquiring ſtrength by repetition, produces its fulleſt and moſt trying effects in advanced age, when venous plethora occurs †; and when too the veins of the head, in old people, are particularly ſubject to rupture, and the conſequent

* Vid. Sweit. Comm. in Boerh. Aph. 1010, 1059.

† Cullen's Inſtit. of Medicine, p. 136. A greater quantity of blood is contained in the arteries, in proportion to that contained in the veins, at the beginning of life, than at any after period. From the time that the body has arrived at its full growth, the quantity of blood contained in the veins, in proportion to that contained in the arteries, is conſtantly increaſing.

Lect. on Mat. Med. p. 12. "The arteries are larger in proportion to the veins in the young than in old ſubjects. Wintringham, jun. finds the denſity of the arterious coats leſs in young than in old people. The arteries therefore from being laxer grow more rigid, and are laxer as nearer to the heart. All this is wiſely ordered, for the arteries being more expoſed to the action of the heart, and the fluids in their moving from a greater to a leſſer diameter, are ſooner ren-

quent effuſion of blood, far the moſt frequent and fatal cauſe of apoplexy *.

Thus much, by way of example, to ſhew the bad effects of unneceſſary bleeding. It has been proved, that habitual artificial diſcharges of blood, inſtead of diminiſhing, tend to produce plethora; the pernicious conſequences of which, on the human conſtitution, have been briefly enumerated.

Some may object to this reaſoning, that, in many inſtances of habitual blood-letting, the effects here mentioned have not followed; and that, where they have, other cauſes more powerful have principally produced them. We anſwer, that ſuch argument is inconcluſive in itſelf, and foreign to the preſent ſubject. Not uncommonly the ſlighter effects of this abuſe of blood-letting are inaccurately over-

rendered rigid than the veins, in which the power of the heart is weaker, and the fluids move in a contrary manner. Hence ariſes in young perſons the arterious, in old the venous plethora; a diſtinction commonly unobſerved, though it gives a conſiderable difference in point of temperament."

* Ἀποπληκτοι δὲ μάλιϛα γίγνονται, ἡλικίῃ τῇ ἀπό τεσσαρακονταετέων ἄχρις ἑξήκοντα. Hip. Aphor. 57. Sect. vii.

Prof. Alpin. de præſagienda vita et morte ægrot, p. 54.

overlooked, or ignorantly neglected. But, where that is not the caſe, it may be obſerved, that particular cauſes of diſeaſe, when not alone compleatly efficient, are often applied without inducing any morbid effect. Hard would be the fate of mankind, were every ſpecies of contagion to infect every perſon to which it might be applied. To argue, that habitual bleedings are no cauſe of apoplexy, becauſe apoplexy is not conſtantly induced, is juſt as rational as to deny the very power of a peſtilential contagion, becauſe it has been applied to thouſands without exciting the peſtilential fever. — To produce a diſeaſe, two particulars in general are requiſite; firſt, the prediſpoſition of the body; ſecondly, the application of the exciting cauſe. Without the prediſpoſition, we are often expoſed with impunity to otherwiſe very active cauſes of diſeaſe; and, without the application of the cauſe, the prediſpoſition may continue with us through life without inconvenience. — With regard to the latter part of the objection, that other cauſes, more powerful, acting in conjunction with habitual blood-letting, may probably have produced the effects which have been enumerated, it is evidently foreign to the purpoſe. We grant that full living, and the neglect of exerciſe,

erciſe, may very powerfully aſſiſt in exciting the bad conſequences of plethora. It is believed too, that there are men who would rather ſubmit to be bled even once a month, with the privilege in the mean time of indulging their vitiated appetite at large, and of enjoying the pleaſures of eaſe, than by living a temperate active life, poſſeſs the moſt perfect ſtate of health, the free gift of heaven, independent of the aſſiſtance of art *. Yet the argument, juſt advanced,

* It is worth remark, that full living and the neglect of exerciſe tend moſt powerfully to induce plethora, and all the train of bad conſequences here enumerated. Living very much upon animal food, which is conſiderably more nutritious than vegetables, fills the ſyſtem too full of blood, and is very prejudicial to health. A mixture of animal and vegetable diet is required. As Dr. Haller obſerves, Vegetabilia requiruntur tamen, ne ſolis carnibus paſtus homo ſanguine repleatur, & nimio & nimis putreſcibili, qualis in anthropophagis certa fide regnat, & ſcorbutum facit, & ferocitatem, fætorem, lepram, corruptionis lixivæ omne genus, quæ omnia mala mutata diæta & vegetabili acidulo victu unice ſuperantur. Prim. Lin. p. 342. Yet a moderate quantity of animal food is extremely wholeſome.—In hyſteric and hypochondriac diſorders, we are ſometimes obliged to forbid almoſt the uſe of vegetables; but it muſt be obſerved, that this moſt important change in diet is often made without neceſſity. Dr. Cullen in his Materia Medica ſays, "I have known ſeveral inſtances of ſcurvy in exceſs produced by a long

vanced, appears ſtill deciſive, that habitual blood-letting often produces a ſanguine fulneſs of the vaſcular ſyſtem, liable to be followed with pernicious effects, and is therefore, without very urgent cauſe, abſurd, and highly detrimental to health.

We proceed to the conſideration of the abuſes of medicine, which ariſe from the Imprudent Uſe or Neglect of blood-letting, in the treatment of diſorders. From ſurveying a catalogue of diſeaſes, it is intended, without any ſtudied method, to give ſome examples of erroneous practice with reſpect to bleeding. We ſhall avoid prolixity by omitting numberleſs caſes of abuſe, which though ſerious in themſelves, would be ſuperfluous to our deſign. For the writer has not the moſt diſtant intention

long continued uſe of animal diet, which it is always unlucky to be obliged to preſcribe; and when it is abſolutely neceſſary to preſcribe, it ſhould be joined with as much of the vegetable as poſſible, and when a cure is performed, we ſhould gradually recur to that again." Of ſo much importance does Dr. Cullen conſider this change.—Beſides the quality, we ſhould pay great regard to the quantity of our aliment. Haller very juſtly obſerves, that a moderate quantity of food nouriſhes the beſt. Aliquanto parcius in univerſum victus melius nutrit; niſi multus labor acceſſerit.

tion of making any man his own phyſician; well knowing that ſuch a deſign, however popular it may be, is far above the reach of his capacity to accompliſh.

We ſhall begin with the abuſe and neglect of blood-letting in Febrile Diſorders; which afford the moſt difficult and intereſting part of medical practice, and ought therefore to be regarded as the principal object of our conſideration.

The Synochus is one of the moſt frequent and fatal fevers of this Iſland *. It often ariſes from contagion †; begins in ſome meaſure

* The term Synochus is employed, becauſe there is no word in the Engliſh language expreſſive of the ſame meaning. Dr. Cullen has defined it in his Synop. Noſol. Method. p. 257, Morbus contagioſus. Febris ex ſynocha & typho compoſita, initio ſynocha, progreſſu & verſus finem typhus. Putrid ſymptoms are not eſſential to characteriſe the diſeaſe, though they frequently occur.

† When this fever is not attended with ſymptoms of putrefaction, and the ſtricteſt regard is had to cleanlineſs, the contagion, as immediately ariſing from the body of the ſick, appears to be not of an active nature. But when the fever is putrid, and the ſick breathe a confined foul air, it is often extreamly infectious. Sir John Pringle obſerves, that, even in the jail or hoſpital fever, "the common courſe of the infection is ſlow and catching to thoſe chiefly who are conſtantly

with the ſymptoms of an inflammatory fever, but in its progreſs, ſooner or later, puts on by degrees the appearance of a nervous fever, which is frequently attended with ſymptoms of putrefaction. It is a diſorder moſt common in cold climates, and conſiderably influenced even by the coldneſs of a ſeaſon. It is confined to conſtitutions, either vigorous, or at leaſt where there is yet ſome conſiderable remains of vigor; while the pure nervous fever, ſtill more deſtructive, ſingles out the weaker part of mankind for the unhappy victims of its rage. Thoſe two fevers, ariſing from one common contagion, may, at the ſame time, and in the ſame place, be both epidemic together. The difference between them is derived, not from their cauſes, but from the conſtitution of patients.

The Synochus is here choſen in preference to any other genus of fever, more ſtrictly ſo nominated, as being particularly applicable to the preſent purpoſe. It affords a very ſtriking, but a lamentable inſtance of the abuſe of medicine,

ly confined to the bad air; ſuch as the ſick in hoſpitals, and their nurſes, and the priſoners in jail". Dif. of the Army, p. 289.—Dr. Gregory remarks, in his Elements on the practice, p. 46, that the common nervous fever, without putrid ſymptoms, rarely ariſes from contagion.

dicine, both from the neglect, and from the too liberal use of the lancet.

The reaction of the system, founded on the salutary efforts of nature, excited by the sedative operation of the contagion, is very apt at the beginning of this fever, particularly in robust irritable habits, to proceed to a morbid excess. The action of the heart and arteries is dangerously encreased, as is evident from the unnatural heat of the body, with an uncommon strength and frequency of the pulse. In this state of the disease, the patient is liable to have topical determinations of blood to different parts, producing dangerous, or even fatal inflammations, particularly of the brain or lungs, sometimes of the abdominal viscera *. In such cases, the prudent, yet liberal use of blood-letting, is the best and most effectual means for preserving a due medium of reaction, and preventing the sad consequences of its excess †. But in such cases too, errors of practice frequently arise from the neglect of bleeding.

On the other hand, the contrary error, from letting blood with too great freedom, has, in

* Vid. Gregory's El. of Practice, § 17.

† Vid. Huxham on Inflam. Fevers, p. 5.

this fever, been ſtill more frequently dangerous in its effects. In the former inſtance of the abuſe of medicine from neglect, the practitioner ſtands a paſſive humble ſpectator, while nature makes her own efforts to remove the diſorder. In the latter, he becomes not only active, but highly raſh. It was ſaid, that, in the progreſs of this fever, the inflammatory ſymptoms gradually diſappear, and change into the more depreſſing ſymptoms of debility and putrefaction. The diſeaſe, gaining ſtrength by duration, and by the continued action of a ſedative cauſe, becomes more and more inſupportable to nature, eſpecially if the patient be weakened by repeated imprudent loſſes of blood. The ſtrength of the ſyſtem, like the wealth of a nation, ſhould be preſerved with the exacteſt caution, that it may be found vigorous in health, and able, when under diſeaſe, to ſupport the conflict, and overcome the dangers with which it is threatened.

This abuſe from exceſs of bleeding has of late years become far more conſiderable in its effects, from the acknowledged degeneracy of the conſtitutional vigor of the human ſpecies. Indolence and luxury have upon the whole deſtroyed more men, than the ſword, peſtilence,

or

or famine. Theſe calamities, it is true, have at particular times, and in particular parts of the globe, raged with more diſtinguiſhed violence; but indolence and luxury, like ſlow poiſons diffuſed through the atmoſphere, are at all times, and in all places, extirpating the human race. Trade, commerce, and literary purſuits often confine men to a ſedentary, unwholeſome manner of life. The arts of hunting, paſturage and agriculture, employ perhaps fewer people in the preſent age, proportionably to the number of the inhabitants of civilized nations, than in former days when men were leſs occupied in various commercial and literary purſuits. Manly athletic exerciſes are much leſs in vogue, becauſe they are ill ſuited to the ſoftneſs and effeminacy of modern times. Thoſe who among us happily live under the neceſſity of acquiring by their bodily labor the common neceſſaries of life, and who conſequently ſtand the faireſt chance of enjoying the higheſt health, are very liable, for the lucre of gain, to purſue buſineſs beyond their ſtrength, and raſhly to deſtroy in a ſhort time the tone of their ſyſtems. Theſe cauſes, among many others, have rendered men leſs robuſt than they formerly were; leſs ſubject to the Synochus, though more ſubject to the low nervous fever;

and

and conſequently leſs able than our hardy anceſtors of bearing with impunity the repeated operations of blood-letting.

Hence, if any modern phyſician were to bleed in fevers with the freedom recommended by ſeveral of the antients, his practice would neceſſarily prove very unſucceſsful. — What then muſt determine the propriety of blood-letting in all ſuch caſes of dilemma? The anſwer is obvious; caution, judgment, medical erudition. The able practitioner will know the true ſtate of his patient. He will ſo plan his method of cure, that while he ſtrives to ſteer free of one rock, he will not ſplit his veſſel upon another. He will examine the indications which occur relative to the uſe of blood-letting. He will conſider the plethoric ſtate of the ſyſtem,—the ſtrength and vigor of its fibres, — and the age of his patient, whether he has reached the meridian of life, when the tenſion of the ſyſtem is the greateſt. He will conſider the degree of inflammatory diſpoſition; whether his patient be ſubject to frequent attacks of inflammatory diſorders; or whether he be habituated to natural or artificial evacuations of blood. He will reaſon with himſelf concerning the nature of the remote

cauſe

cauſe of the fever, how far it may be fairly referred to the influence of cold, unaſſiſted by the depreſſing action of contagion. He will conſider the time at which the diſeaſe began; whether or no the hot fit be compleatly formed, and how long it has prevailed; and whether the fever be of the continued kind, with the moſt imperfect remiſſions and exacerbations. He will deduce an argument in favor of blood-letting, from the nature of the prevailing epidemic; and aſcertain, by the moſt cautious experience, how far it admits of relief from that remedy. He will alſo examine moſt minutely the degree of febrile heat; the ſtate of the pulſe, reſpecting ſtrength, hardneſs, and frequency; and the tendency of the diſeaſe to topical inflammations. In proportion as he can give the affirmative to ſuch particulars, the indication for blood-letting appearing ſtronger, he will proceed with greater freedom to enjoin it *.

Succeſs, in all human probability, will often ſecond his endeavors to relieve his fellow creatures in diſtreſs; but the ſolidity of his judgement will prevent him from proceeding raſhly. He

* Vid. Boerh. Inſtit. Med. § 1230.

He will not venture on a repetition without the moſt evident neceſſity. He will reflect maturely on the conſequences of the fever, which he will cautiouſly avoid encreaſing, becauſe his humanity has taught him to dread them. By the effects of one bleeding, he will judge of the propriety of repeating the operation *. He will be ſparing of the vital fluid in infancy, in old age, in irritable and phlegmatic temperaments, which are unable to bear conſiderable loſſes of blood. He will not be deceived by the oppreſſed pulſe, often concomitant on plethora, denoting great tenſion of the vaſcular ſyſtem, feeling ſmall, hard, and contracted, but from vene-ſection becoming ſoft and full †. He will not abſurdly ſee his female patient expire from the neglect of bleeding, becauſe ſhe has her menſes ‡, or is pregnant *.

* Huxham on Fevers, chap. viii.
Pringle's Obſervations, part iii. chap. vii. ſect. v.
Monro Diſ. Mil. Hoſp.

† Huxham on Fevers, p. 6.

‡ Lect. on Mat. Med. p. 31. "Conſtant repetitions of this evacuation comes to fix it independent of ſtrong cauſes, either favouring or preventing repletion, e. g. blood-letting will not impede it, &c." Phyſicians are agreed upon this practice. Hunter's Anatomical Lectures. Young's Lectures on Midwifery. MacKenſie's Lectures on Midwifery.

hant*. He will examine the appearances of the blood when drawn; conſider the preſence of the inflammatory cruſt as favoring a repetition of the operation; but underſtanding its nature, and knowing how many trivial neglected incidents prevent its formation, he will wiſely not conclude much from its abſence†. He will recollect that ſmall bleedings often afford ſubſtantial relief. He will underſtand if his patient faint during the operation, what concluſions from thence may juſtly be drawn; how far debility may be ſuppoſed to have been the cauſe; and how far the ſingularity of conſtitution may be concerned. In all caſes he will examine, with ſcrupulous attention, the ſtate of the pulſe, and provided there be no topical inflammation, he will not preſume, if the pulſe ſink and become weak, to riſque a repetition of blood-letting. The violence of ſymptoms, denoting the exceſs of ſtimulant power, will afford him the rule of his conduct. He will be perſuaded that it is ſafer to err on the ſide of mo-

 deration,

* When we bleed a pregnant woman, we ſhould cautiouſly endeavor to prevent her from fainting; for which purpoſe too great a quantity of blood ſhould not be taken away at one time, the orifice ſhould be frequently cloſed, and the patient ſhould lie in a horizontal poſture.

† Greg. Elements, § 70.

deration, than raſhly to plunge into the calamities of exceſs; and that it is a much harder taſk to raiſe a ſinking conſtitution, than to take off the exuberance of ſtrength *.

Before we diſmiſs the conſideration of the abuſe of bleeding in the Synochus, an important diſtinction ſtill claims our attention. Every one underſtands what is commonly meant by delirium in fevers. But the variety of febrile delirium frequently paſſes unobſerved; the method of treatment is of courſe often erroneous, or at leaſt unſteady. The diſtinction I would hint at, leads me to ſpeak of two ſpecies only. In both theſe occurs a dangerous determination of blood to the head, with an inflammation of the brain, or a ſtrong tendency towards it. The determination is diſcoverable by an acute fixt pain in the head; by a vivid redneſs of the face, and a ſuffuſion of the eyes; by a wild fierceneſs of aſpect; by a morbid ſenſibility to light and ſound; by great anxiety, with frightful unrefreſhing ſleep; and by delirium, rendering the perſon at times furious and ungovernable †. Thoſe ſigns being common to

* Vid. the author's Diſſert. de febribus continuis medendis, p. 19.

† Boerh. Aphor. 772, 773. — Van Sweit. Comm. ib.— Cullen's Noſolog. Method. p. 265.

to both ſpecies, ſometimes perplex and miſlead inferior judgements. The chief diſtinguiſhing marks lie in the habit and affection of the general ſyſtem. In one of thoſe phrenetic ravings, the conſtitution is more full and plethoric; the force of circulation is encreaſed, with greater ſtrength and hardneſs of the pulſe; and the attack is nearer the beginning of the fever. When the other occurs, it is at a later period, attended with weakneſs of pulſe, and proſtration of ſtrength. Timidity of practice in the firſt, or raſhneſs in the latter, has often paved the way to a premature end. In one, the violence of inflammation, — in the other, the general depreſſion of the conſtitution, demands ſingular attention. In one, large, general, and repeated bleedings, particularly from the jugular veins, are chiefly to be depended upon. In the other, topical bleedings only can with ſafety be admitted *.

This is one inſtance of the abuſe of bloodletting, taken from the fatal claſs of fevers. Omitting all further examples from this ſource, we paſs over intermittent, remittent, inflammatory, and nervous malignant fevers, with their endleſs complications and varieties. I haſten

* Greg. Elem. § 72.

to point out a few inſtances of the abuſe of blood-letting in local inflammations.

The improper treatment of the Inflammation of the Eyes, has greatly injured many conſtitutions. Various cauſes, it is true, may have conſpired in producing this effect. But, among the reſt, general bleeding has doubtleſs contributed its ſhare. When the coats of the eye are inflamed; when the inflammation is deeply ſeated; when there is conſiderable ſwelling of the eye-lids, with violent pain, intolerable irritation from light, and an inflammatory affection of the ſyſtem, general bleeding is evidently indiſpenſable, and ſhould be regulated in reſpect to the quantity of blood to be drawn and the repetition of the operation, according to the urgency of the ſymptoms. But there are many caſes of inflammations of the eyes, which are to be conſidered merely as local, and not requiring repeated general bleedings *, in which, however, by ſuch raſh practice the conſtitution, eſpecially if not very ſtrong, is greatly enervated, and ſometimes rendered highly irritable. The unſkilful practitioner frequently

* Diſ. of the Army, p. 135, where it is obſerved, that ſlighter caſes may be cured without general bleeding.

quently expreſſes ſigns of aſtoniſhment, at the want of ſucceſs from ſuch imprudent treatment. He ought to have known that in this inflammation ſubſiſting as a local affection, general bleeding, except in urgent caſes, is unſeaſonable, ineffectual, and greatly inferior to topical bleeding *. By the latter the diſcharge is made more immediately from the part affected, the relief conſequently is more manifeſt, and the conſtitution little affected. Cupping with ſcarification, performed by a ſkilful operator, is preferable to leaches. By that means the evacuation is more ſudden; the relaxation of the inflamed parts is greater; the quantity of blood more exactly aſcertained; ſwelling and diſcoloration of the eye-lids not liable to enſue; and the ſmall inciſions of the inſtrument are more favorably diſpoſed to heal, than the orifices which are made by the bite of the leach. Both cupping and leaches are preferable to the opening of the temporal artery, becauſe this operation is more painful as well as troubleſome; and in conſequence of the uncertainty of the quantity and the frequent ſlowneſs

* Gregory's Elements of Practice, § 261. "If it is merely a topical affection, but attended with great tenſion and pain, the cure depends upon topical bleeding in the temples, internal palpabræ and albuginea, &c."

neſs of the diſcharge of blood, its effects are more precarious. When the blood flows freely, there is often conſiderable difficulty in ſtopping the hemorrhage, which after all is apt to break out; or if the artery be too cloſely compreſſed by bandages, the good effects of the bleeding will hardly compenſate for the ill effects ariſing from the compreſſion. It muſt however be granted that this operation, when it happens to be performed without the inconveniences here mentioned, is found efficacious.

The Inflammation of the Throat is a diſeaſe, in which the practice has too often been unſteady and erroneous. It will give us occaſion to ſhow, that there are ſome who practiſe according to a miſtaken faſhion without any ſolid principles; even when that faſhion is in direct oppoſition to experience, and the moſt eſtabliſhed maxims of phyſic. This genus of inflammation comprehends different ſpecies and varieties. Theſe require the greateſt diverſity of practice. Hence the ſource of medical abuſe.—The ſpecies of this diſorder here to be conſidered, are the croup, the inflammatory ſore throat, and that of the ulcerous malignant kind.

The

The common inflammatory angina admits of the greateſt relief from blood-letting. But in the ulcerous malignant angina, blood-letting has frequently proved fatal. The croup till of late has often been totally miſtaken; ſuppoſed to be a ſpaſmodic affection of the larynx; when in reality it is primarily an inflammation of that organ *, and ſpaſm ſooner or later follows only as a conſequence of irritation †. Hence it is obſervable, that the croup, like other inflammations, attacks moſt commonly in the ſpring ‡, and is often accompanied with catarrh. The attendant ſymptoms are very ſimilar to thoſe, which authors have aſcribed to the inflammation of the larynx. The ſloughs found on diſſection, lining the larynx, are the known productions of inflammation. Gangrene too, the conſequence of previous inflammation, has in a few caſes been diſcovered by diſſection.

Though general bleeding is ſometimes uſeful in the common inflammation of the throat, yet it has undoubtedly been often employed without the leaſt ſhadow of neceſſity. The diſorder

* Cullen's Noſol. Method.

† Greg. Elements of Practice, § 267.

‡ Νεσήματα δὲ πάντα μεν ἐν πάσῃσι τῇσιν ὥρῃσι γίνεται, μᾶλλον δὲ ἔνια καὶ ἐνίας αὐτέων καὶ γίνεται καὶ παροξύνεται. Hipp. Aphor. 19. ſect. 111.

diſorder is frequently ſlight, merely local, with little feveriſh affection of the ſyſtem. Here topical bleeding may be uſed with advantage; but general bleeding is highly improper. Since veneſection in the ulcerous ſore throat, has been experienced to be ſo very detrimental *, and mankind have, with good reaſon, been conſiderably alarmed; ſeveral of the faculty, awed by the apprehenſions of their timorous patients, and unable to diſtinguiſh accurately between the ulcerous and the inflammatory angina, have neglected bleeding in the latter, when the fever was high, and the violence of the inflammation ſeemed evidently to require it. — The miſtaken doctrine concerning the nature of the croup, which is a dangerous, and often a fatal diſtemper, has led to great abuſe of practice. Antiſpaſmodic remedies have been too much relied upon in the cure of the diſeaſe. Blood-letting, particularly topical, which is the moſt important part of the treatment, has frequently been omitted. Antiſpaſmodics no doubt have their utility, but can never ſuperſede the previous neceſſity of bleeding †.

To

* Fothergill on the ulcer. ſore throat, p. 41.

† Vid. Home's Principia.—Greg. Elements.—Van Sweiten's Comment.

To avoid ſuch confuſed erroneous practice, it is neceſſary to obtain a juſt notion of the nature and a correct diſtinction of the different ſpecies of angina. Without deſcending minutely into the particulars of all the ſpecies of this genus, I ſhall only make a few general remarks, by which to diſtinguiſh the ulcerous malignant ſore throat from every ſpecies, merely inflammatory. Were this diſtinction generally known, errors would hardly be ſo frequent in regard to the uſe of the lancet. The ulcerous and the inflammatory anginas attack ſimilar parts, which being affected by either ſpecies of the diſeaſe, have their functions diſturbed and naturally give a ſimilarity of ſymptoms.—The ulcerous is generally attended with an eryſipelatous affection of the throat; the inflammatory with a common phlegmonic inflammation. In the latter the inflammation runs higher, the ſwelling of the inflamed part is generally more conſiderable, accompanied with acuter pain*, more vivid redneſs, and greater interruption of the functions of the

 part.

* "In the gangrenous angina the parotid and maxillary glands and tonſils are ſwelled, which makes the neck ſtiff, but there is rather a ſenſe of fulneſs in the throat than any conſiderable difficulty of ſwallowing."

Greg. Elem. §. 277.

part *. The eryſipelatous angina is much more diſpoſed to ſpread; of a deeper florid redneſs †; with the ſenſe of a burning heat, and the appearance of ſloughs of different colors, as white, cineritious, or livid, concealing ſmall ſpreading ulcerations. The ſymptom of ſloughs has been regarded by many as fully characteriſtic of the diſorder. This miſtake has been productive of very unſkilful practice. For ulcerations, with aphthous ſpots or even livid ſloughs ‡, have ſometimes appeared in the inflammatory angina. Hence the neceſſity of other diſtinguiſhing marks, which indeed of a very convincing kind are generally known to the able practitioner. The different ſpecies of the inflammatory ſore throat are never contagious, though from common circumſtances of climate, ſeaſon and ſituation, they may

* Dr. Fothergill on the ulc. ſore throat, p. 38, obſerves, that though the tonſils are ſometimes very much ſwelled, yet "the patients often ſwallow with leſs difficulty and pain than might be expected under ſuch circumſtances."—And in another paſſage, p. 12 "the parts above-mentioned were ſwelled more or leſs, though not always ſo much as to affect perſpiration as in a common angina."

† Fothergill on the ulc. ſore throat, p. 12.

‡ Cullen's Lectures on the Practice.

may ſometimes appear under the form of an epidemic. The fever too is of an inflammatory nature.—The eryſipelatous angina, which is very fatal to children, is always highly contagious, and wherever it appears, it is generally epidemic. The attendant fever is of the nervous putrid kind, with remarkably fœtid breath, great debility, a feeble irregular pulſe, deep anxiety and delirium, accompanied ſometimes with hemorrhages, and often with a diarrhæa, and an eryſipelatous efflorescence appearing on different parts of the ſurface of the body *. The hiſtory of the putrid fever clearly underſtood, in conjunction with the remarks above-mentioned, will ſerve to diſcriminate theſe different ſpecies of angina. When the complaints are complicated, forming a caſe of no uncommon occurrence, the phyſician from clear deductions of reaſon, ſhould vary his practice according to the peculiar nature of the diſeaſe; the proper treatment of which in ſuch circumſtances is attended with the utmoſt difficulty.

We ſhall next conſider the abuſe of blood-letting in the Pleuriſy and Inflammation of the Lungs. Veneſection is the ſovereign remedy

* Fothergill on ulc. ſore throat, p. 49, 50, 51.

in the treatment of both diſorders. The ſkill of the phyſician diſcovers itſelf moſt in judging properly concerning the time of the operation, the quantity of blood to be evacuated, and the neceſſity of repetition. Soundneſs of judgment in thoſe particulars often gives ſubſtantial evidence of the practitioner's abilities. Errors of judgment I fear have been often followed with the worſt of conſequences. Perſons too naturally of the ſtrongeſt conſtitutions, are the moſt liable in the pleuriſy and inflammation of the lungs to fall a ſacrifice to injudicious practice. Thoſe diſorders are often rapid in their progreſs. Four days neglect frequently places them beyond the reach of art. The ſtrength and fulneſs of the conſtitution tends to increaſe the danger of the complaints. The aſſiſtance of art is always indiſpenſable and very efficacious.—Timidity in the phyſician is death to the patient. This however is not a common fault, when the practitioner is conſulted at the beginning of the diſorder. But if in its progreſs, for inſtance, about the fifth or ſixth day, a freſh inflammation of the pleuritic or peripneumonic kind commences, too great timidity in practice will often endanger the life of the patient. Whereas the ſkilful

practi-

practitioner, unembarraſſed by ſuch incident, will boldly, but judiciouſly repeat the operation of blood-letting, and, for the moſt part, be able with ſafety to complete a cure. Here it may not be improper to obſerve, how extremely dangerous it is to delay calling for timely aſſiſtance *. For if the patient, unaided by the art of medicine, eſcape with his life, he may ſtill ſuffer for his neglect, from an obſtruction of the lungs and a dangerous conſumptive cough, which are frequently the remains of this complaint, and liable to be continued or increaſed from the viciſſitude of the weather, and the ſlighteſt application of unaccuſtomed cold.

About the fourth day, thoſe inflammations have generally been thought to be on the point of ſuppuration. This doctrine was carried far beyond the line of truth. Its conſequences of courſe have proved unhappy. Inflammations proceed to ſuppuration with very different degrees of quickneſs. Though the received opinion

* See Monro Diſ. Mil. Hoſp. p. 115. "The Peripneumony was much more dangerous and fatal than the pleuriſy, eſpecially when neglected in the beginning; for then bleeding had ſeldom any effect, &c. and death only afforded relief."

opinion above mentioned, be often certainly true, that in four days the inflammation ſhall have proceeded to an incipient ſuppuration, or, what is more frequently fatal, to ſuch an effuſion of blood into the cellular membrane of the lungs, as to render bleeding, which in the beginning of the diſorder was the principal remedy, then ineffective; yet that opinion can by no means be conſidered as univerſally eſtabliſhed in fact. Later experience has taught us, that inflammation, which is attended with very different degrees of encreaſed action and reſiſtance in the veſſels of the part, may ſubſiſt a longer time without ſuppuration, or ſuch extravaſation as to forbid the uſe of the lancet. From the fourth to the ninth day, we have many examples extant, where veneſection has been preſcribed, not only with impunity, but with the happieſt effect *.

At

* Monro Diſ. Mil. Hoſp. p. 112. "Phyſicians formerly uſed to forbid bleeding after the fourth day, if it had been omitted ſo long; but when no ſymptoms of ſuppuration had already appeared, on whatever day of the diſorder it happened, I ordered plentiful bleeding, the ſame as in recent caſes, and never found any diſadvantage but often great ſervice from this practice." Several caſes of pleuriſy and peripneumony have fallen under my own obſervation, in which bleeding was moſt ſucceſsfully employed after the eighth day.

At the ſame time, the phyſician ſhould be cautious not to check or prevent, by unſeaſonable blood-letting, the moſt happy criſis by expectoration, which is often far ſuperior to all the ſecondary efforts of art *.

With regard to the quantity to be evacuated, it is ſcarce neceſſary to obſerve that error is not uncommon. Sometimes blood is repeatedly drawn to ſuch exceſs, as to endanger life by cauſing too great a depletion of the veſſels, by interrupting expectoration, by inducing too ſudden and great diminution of the tone of the ſyſtem, and by impoveriſhing the blood, eſpecially in old and weak people, to ſuch a degree as dangerouſly to encreaſe ſerous effuſions, particularly into the cavity of the thorax, and branches of the trachea †. Hence the diſtreſſed ſituation

* Obſerv. on Diſ. of the Army, p. 140.

† Dr. Cullen mentions one man who was repeatedly bled to ſuch exceſs, for the cure of a pleuriſy, that at laſt he inſtantly expired under the operator's hand.—Numerous diſſections, and particularly thoſe of the celebrated Morgagni, prove that the hydrops pectoris is no infrequent conſequence of peripneumony. Too copious bleedings tend to increaſe ſuch ſerous effuſions.—" With regard to the quantity and re-

tion of ſuch patients, who are almoſt ſuffocated with phlegm, which they are unable to expectorate.

An error far more frequently injurious than the former, takes its riſe from timidity of practice. A free copious expectoration often affords great relief; but a timid expectation of its occurrence, with a ſervile attention to its progreſs, has, in numberleſs inſtances, proved highly dangerous. It would indeed be a very unſafe practice to ſubmit the cure of a pleuritic fever to nature alone. Nature ought always care-

repetitions of bleeding, no preciſe rule can be given. Sydenham has ſpecified forty ounces for the whole quantity, which men may at a medium loſe in a pleuriſy; but this in our circumſtances would have been too little had it not been for bliſters, which not only ſhortened the cure, but prevented the loſs of a great deal of blood." Pringle's Diſ. of the Army, p. 141.—Cleghorn obſerves on the diſeaſes of Minorca, p. 280, that "by carefully weighing the blood he found that between forty-eight and fifty-four ounces were frequently taken away during the firſt four-and-twenty hours of his attendance." If ſymptoms required it, he afterwards took away, at different times, twelve or twenty-four ounces more in the ſpace of a day.—In this manner he cured pleuriſies of the moſt fatal tendency in the ſpace of a few days, and with as much certainty as any diſtemper whatever. Ibid. p. 281, 282.

carefully to be ſtudied; but art where it can prevent the attack or ſtop the progreſs of a diſeaſe, ſhould always be ready to lend aſſiſtance. Bleeding with judgment tends to promote rather than to check a ſalutary expectoration.

In the inflammation of the lungs, the pain, from the inſenſibility of that organ, is often obtuſe and inconſiderable. The diſeaſe in this caſe is frequently attended with greater danger, from extravaſation of blood into the cellular membrane, than a pleuriſy with the moſt exquiſite pain *. Hence the great fallacy of determining the practice of blood-letting, by the ſeverity of this ſingle ſymptom. The pulſation of the arteries too affords but a very uncertain indication of cure; becauſe the courſe of circulation through the lungs is ſo greatly interrupted. We ſhould judge therefore in ſuch caſes of the violence of the diſeaſe, from the number and degree of the other ſymptoms. The fever, anxiety, cough, pain generally when the patient lies on the affected ſide, a bloated ſuffuſion of the countenance, with a

* "The peripneumony was much more dangerous and fatal than the pleuriſy, eſpecially when neglected in the beginning, for then bleeding had ſeldom any effect." Monro Diſ. Mil. Hoſp. p. 115.

difficult laborious reſpiration and great depreſſion of ſtrength, will clearly diſcover the alarming nature of the complaint.

So much for the abuſe and neglect of blood-letting in the inflammations of the eyes, the throat, and the lungs. We cannot ſtop to explain the abuſes of this remedy in the treatment of External Inflammation, whether of the Phlegmonic or Eryſipelatous kind. Nor with regard to the latter to attempt to reconcile the variety of opinions relative to bleeding, and to ſhew the great influence of the impure air of large cities in varying the nature of the diſeaſe and the method of cure, by inducing important changes in the conſtitution.—We ſhall be ſilent on Inflammations of the Heart, Pericardium, Midriff and Peritoneum. We ſhall paſs by all the Abdominal Inflammations, without even attempting to reconcile the confuſed practical contradictions we meet with in authors.—We cannot ſtay to mention the fatal abuſes of the lancet in Inflammations of the Alimentary Canal, which are frequently confounded with ſpaſmodic affections, and from neglect of bleeding terminate in fatal gangrene. The great depreſſion of ſtrength and weakneſs of pulſe, always attendant on inflammation of the ſtomach or bowels,

ſtrongly

ſtrongly favor the miſtake. Yet blood-letting, by mitigating the inflammation, abſolutely gives vigor and effectually reſtores the natural force of elaſticity to the weakened ſprings of life *.—Nor ſhall we mention the fatal error from overlooking, in conſequence of a treacherous mildneſs of ſymptoms, the riſe and progreſs of the Inflammation of the Liver or Spleen; and from neglecting the proper uſe of the lancet, till there occurs an unexpected abſceſs †, which is generally followed by a lingering conſumptive death.—We omit the Inflammation of the Kidnies, often confounded with a fit of the ſtone, and for want of properly diſtinguiſhing between them, terminating alſo from the neglect of blood-letting in a dangerous illneſs. We paſs over Inflammations of the Womb; which are ſo common, ſo dangerous, and ſo frequently incurable, from injudicious practice in the art of midwifery ‡.—We paſs over too

* Fordyce's Elem. of Practice, p. 250. † Ibid. p. 259.

‡ Among a variety of other cauſes inducing this inflammation, none have more regularly contributed to this end than the unnatural, painful, and pernicious practice of immediately extracting the placenta or after-birth after delivery, without prudently waiting ſome time for the contraction of

the Acute Rheumatiſm, without mentioning the bad conſequences of the neglect of bleeding in plethoric habits; or of the frequent unneceſſary abuſe from exceſs. This laſt error is often followed by weakneſs and irritability of the conſtitution, which is then rendered of courſe much more ſenſible to the impreſſions of cold, more ſubject to a relapſe, and to the lingering pains of chronic rheumatiſm.

We come now to the Gout, which is a diſeaſe of a peculiar nature, different in its phenomena from every other genus of inflammation. The abuſe of blood-letting in this diſorder, has been followed with the moſt pernicious effects. But before I endeavor to point them out, it may not be improper to diſtinguiſh the gout from the rheumatiſm, a diſeaſe with which it is ſo frequently confounded. Dr. Cullen, in conſequence of a moſt laborious and ſucceſsful inveſtigation of the laws of the nervous ſyſtem, has thrown great light on the nature and treatment

of the womb and the kind aſſiſtance of nature. That raſh practice tends to inflame the womb, to induce great diſcharges of the lochia, and to render the recovery tedious. It is now as univerſally as juſtly exploded by all the moſt able practitioners of midwifery.

ment of the gout, as well as of many other diſorders.

The gout is hereditary, much connected with a peculiarity of temperament with which men are born, and which is founded on the original ſtamina of life, communicable from father to ſon *. The rheumatiſm is peculiarized by no ſuch diſtinguiſhing mark; but may be excited by its remote evident cauſes in almoſt every conſtitution. To diſprove that the gout is hereditary, it is by no means a concluſive argument to advance, that the ſon of every gouty perſon has not always the gout. With equal propriety we might argue, that the evil is not hereditary, becauſe every ſcrophulous parent has not communicated the diſeaſe to his ſon. This argument would prove a great deal too much. When phyſicians aſſert that a diſeaſe is hereditary, I underſtand them as meaning, not that men cannot poſſibly acquire after birth the temperament diſpoſing to it, but that they who are born with ſuch a temperament, are, from the concurrence of certain cauſes,

* Vid. Van Sweit. Comm. in Aphor. 1255.——Gregory's Elements of Practice, § 391.——Sydenham, Hoffman, &c. unanimouſly agree in the truth of this fact, which is confirmed by the moſt undoubted experience.

cauſes, more liable than others to be affected with the diſeaſe. That this fact is true of the gout, none will deny with argument. A conſtitution with this prediſpoſition, is ſubject, from even ſlight irregularities, to be ſeized with the gout; while others, not framed by nature with ſuch peculiarity of habit, live perfectly free from gout in all the moſt profligate exceſs of luxury and debauch. The following circumſtance alſo frequently occurs, and is, though improperly, made a cauſe of ambiguity, whether the gout is to be conſidered as an hereditary diſeaſe. Though one parent may be ſubject to the gout, the other may be free from all hereditary taint; and the offspring, inheriting the temperament of the latter, not be ſubject to the diſeaſe from conſtitution. Even when it has happened, that the ſon of two gouty parents has eſcaped the diſeaſe, it only proves, that though the prediſpoſition exiſted, yet exciting cauſes ſufficiently powerful have not been applied, otherwiſe the gout in all probability would have appeared. But if ſome few, born with the gouty temperament, ſhould, notwithſtanding the application of cauſes, live free of the gout; ſuch exceptions, though they do not in the leaſt invalidate the general rule, confirm a maxim well eſtabliſhed in medicine, that

there

there are men whoſe robuſt conſtitutions are able to bear almoſt every exceſs with impunity.

The gout generally attacks perſons of more advanced age, often not appearing till the thirtieth or thirty-fifth year *, which may be conſidered as the meridian of life. The rheumatiſm occurs frequently at a much earlier period. If this diſtinction of gout drawn from the time of its attack, be leſs characteriſtic in the preſent age than it formerly was, it affords one evident proof, among many others, of the degeneracy of conſtitutional vigor in the politer world.—When children become the ſubjects of gout, it proves in general their conſtitutions greatly degenerated indeed, and forebodes no flattering proſpects of happineſs. Nothing can preſerve them from the miſeries of this

* Boerh. Aphor. 1255. Podagra, ſemper idem, quacunque demum cauſa ortus, ubi naturæ ſuæ decurſum non turbatum abſolvit, ſequi ſolet ætatem matura majorem triginta, & plurium, annorum.

Syden. Oper. p. 435. Podagra eos plerumque ſenes invadit, qui poſtquam meliores vitæ dies mollius ac delicatius, tranſegerint, epulis lautioribus, vino, aliiſque liquoribus ſpirituoſis, liberalius indulgentes, tandem ob pigritiam ætatis ingraveſcentis ſemper comitem, ea corporis exercitia penitus amiſere, quibus juvenes adſueverant.

this diſorder, but a well-adviſed plan of life, and a cautious rational government of themſelves.

The rheumatiſm after a ſingle attack, has in a thouſand inſtances never returned; and where it has, the patient could generally aſſign an external evident cauſe of relapſe. When gout has once made its appearance, it generally recurs *, and often without any obvious cauſe, but eſpecially when it is treated ſo improperly, and with ſuch great neglect, as is frequently to be obſerved. No one practice can poſſibly ſerve for all the different ſpecies of the gout. The variety of the diſeaſe demands a correſpondent variety of practice. Where one perſon has received real benefit from the quackiſh arts he may have employed, and not perhaps without a vain hope of relief, nine, at the loweſt computation, have endangered, or abſolutely ruined their conſtitutions.

Cold is almoſt always the remote cauſe of rheumatiſm, which is therefore a diſeaſe of cold ſeaſons and cold countries, ſcarce known to the inhabitants

* Dr. Gregory obſerves that the gout is more apt to return at ſtated ſeaſons than the rheumatiſm. Elem. of Practice, p. 192.

inhabitants of hotter climates. A fit of the gout may be haſtened by any unaccuſtomed application of cold, but very commonly recurs without it. It claims the aid of other remote cauſes, equally powerful, which frequently undermine the foundation of the conſtitution. I refer here to the neglect of exerciſe; exceſs in venery; intenſe application of mind; late hours; intemperance in diet, reſpecting its quality as well as quantity; the paſſions of the mind, particularly grief and envy; with many other cauſes, the powers of which ſeem to be too much deſpiſed, becauſe perhaps they are too little underſtood.

The gout may attack men of every ſize and temperament; but it has been obſerved to be particularly partial to thoſe of a large ſize, of a full habit *, of the ſanguine phlegmatic or ſanguine melancholic temperament, with a peculiar coarſeneſs of the cuticle. The rheumatiſm affords not the leaſt ground for ſuch

* Vid. Boerh. Aphor. 1255.—Corpus magnum, craſſum, plenum, &c.

Syden. Oper. p. 435. Ad hæc, iſti qui huic morbo ſunt obnoxii, crania habent grandiuſcula, habitu corporis ut plurimum ſunt pleniori, humido & laxo, &c.

a mark of diſtinction. They who are afflicted with the gout, are by conſtitution very liable to be afflicted with the ſtone or gravel *.

The rheumatiſm appears indiſcriminately in either ſex. The gout is more common to men, ſeldom attacking females, unleſs being born with the temperament ſtrongly marked, they have been alſo more than ordinarily ſubject to its cauſes.

Rheumatiſm is very rarely preceded by affections of the ſtomach and nervous ſyſtem, ſimilar to thoſe which almoſt regularly precede a fit of the gout. Sometimes flatulency, colic pains, indigeſtion, want of appetite, with dejected ſpirits, are the forerunners of an attack. Sometimes an uncommon voracity or keenneſs of appetite, foretells its immediate approach. I may add too, as ſigns of a ſimilar event, various affections of internal parts, as of the head or breaſt, with great anxiety and want of ſleep. Such affections, uncommon in rheumatic caſes, determine ſtrongly in favor of the gout.

The

* Syden. Oper. p. 442.

The pain in rheumatiſm is for the moſt part ſeated in the larger joints, as in the ancle, the knee, the elbow, or the ſhoulder, and extends along the muſcular fleſh. The gouty pain is more confined; it generally appears in the ſmaller joints of the hands or feet, and very commonly in the great toe. In future attacks of the gout, the pain may occur alſo in the larger joints; but the diſtinction of the diſeaſe being made from the previous affections, this circumſtance will create but little ambiguity. Beſides, when the gout has continued long, the alternation with internal affections, and the frequent recurrence of fits, will ſtill tend clearly to remove every appearance of uncertainty *.

It is thus we diſtinguiſh the gout from the rheumatiſm. Though no one of the diſcriminating marks, here enumerated, would alone ſufficiently characterize either diſeaſe, yet the whole taken together will almoſt univerſally afford juſt ground for diſtinction. Should it happen (which ſometimes is really the caſe) that both diſeaſes exiſt at once in the ſame patient, the practitioner regulating his conduct accord-

* Syden. Oper. p. 439.

ing to the particulars of combination, will after having made a cautious diſcrimination of the ſymptoms, proceed with ſafety to the method of cure.

Having founded this diſtinction, I ſhall ſpeak of the abuſe and neglect of blood-letting in the gout; both which have ſometimes been attended with alarming and even fatal events. We ſhould conſtantly remember what experience ſteadily confirms, that in the gout great evacuations of whatever kind, but eſpecially by blood-letting, cannot in general be ſafely admitted. Blood-letting however ought by no means to be excluded from our practice. It is ſometimes abſolutely neceſſary in the gout, as well to preſerve life, as to mitigate the excruciating violence of pain.

When the diſorder begins at an early period of life; when the conſtitution of the patient is robuſt and plethoric; when the gout is of the regular kind, ſeated in the extremity, attended with violent pain, redneſs and ſwelling of the part, with reſtleſſneſs and anxiety, with frequency, ſtrength, and perhaps hardneſs of the pulſe, general and topical bleeding becomes an uſeful remedy. When too the gout quits the ex-

extremity, and affects with inflammation any of the viſcera, as the brain, the lungs or the ſtomach, veneſection is as neceſſary for the preſervation of life, as in the original inflammations of thoſe organs *.

In ſome caſes even of ſpaſmodic affection of internal parts, as of the lungs or inteſtines, pain, vigor and fulneſs of habit may require a moderate evacuation of blood. But this remark leads me to mention the dangers which ariſe from unwarrantable freedom in the uſe of the lancet. Too many have experienced the fatal conſequences of blood-letting, imprudently employed †. When the diſeaſe has long exiſted in the conſtitution, and weakened it by repeated attacks; when it is become irregular, and is thrown but very imperfectly on the extremities, alter-

* Gregory's Elem. of Practice, § 404. "If it ſeize any of the viſcera along with fever and the ſymptoms of topical inflammation, it ſhould be treated like any other inflammatory fever affecting the ſame part, while the above-named external applications are uſed to determine the diſeaſe to the feet."

† Boerh. Aphor. 1270. Ex iiſdem deducitur, venæſectionem non attingere mali materiam, ſedem, cauſam: prodeſſe tamen aliquando caſu, revellendo parum, & vires urgentes minuendo.

alternating frequently with ſpaſms of internal parts, but not producing external inflammation; then bleeding is evidently unſafe, and expoſes the conſtitution more certainly to dangerous interior affections of the primary organs of life. Hence ariſe the convulſive aſthma, apoplexy, ſpaſms of the ſtomach and bowels, and many other fatal diſeaſes.

From the claſs of febrile diſorders, it only remains to give three more examples of the abuſe of blood-letting; one ſelected from eruptive diſeaſes; a ſecond, from hemorrhages; a third, from thoſe complaints which are attended with an encreaſed ſecretion, chiefly of mucus, though ſometimes intermixt with blood *. The diſeaſes then to be conſidered ſhall be the meaſles, uterine floodings, and the catarrh.

The Meaſles being a diſeaſe extremely common, errors of practice are liable to be frequently repeated. Blood-letting is of ſuch peculiar ſervice in the meaſles, that the ſucceſsful treatment of the diſeaſe turns principally on its proper uſe. Some, no doubt, have preſcribed bleeding

* An order of diſeaſes, named by Dr. Cullen PROFLUVIA, and defined,—pyrexia cum excretione aucta naturaliter non ſanguinea. Synop. Noſol. Method. p. 304.

ing without neceſſity, and ſome to exceſs; but, waving that point, we will venture to affirm what is well known to the faculty, that the neglect of this evacuation has often rendered the meaſles of great fatality, which is the more lamentable, becauſe the medical art, properly exerciſed, might eaſily have prevented it. The contagious matter of the meaſles generally tends to excite an inflammatory ſtate of the ſyſtem. It acts likewiſe in a peculiar manner upon the lungs, as well as the external teguments. Hence the regular appearance of catarrhal ſymptoms attended with cough. From this ſource alone, the danger of the diſeaſe generally ariſes; a danger ſo conſiderable, that, from miſtaken doctrine concerning the cauſes of it, the meaſles and their conſequences have frequently been found almoſt as fatal as the ſmall-pox. The catarrhal affection, eſpecially in inflammatory habits, is extremely liable, even after the eruption at its uſual time has diſappeared, to proceed to inflammation of the lungs. This inflammation, left to nature, either proves ſuddenly fatal from extravaſation or gangrene; or terminates in ſuppuration; or forms hardened knots or tubercles in the lungs, which diſpoſe the perſon to habitual coughs, eſpecially during the winter ſeaſon, and frequently

quently induce at laſt a ſpitting of blood, ulceration of the lungs, and a lingering conſumptive death. Hence, to avoid all theſe evils, appears the neceſſity of copious repeated evacuations of blood *. Strange that ſuch unhappy effects ſhould have been unexpectedly attendant on the miſmanagement of ſo common a remedy, in ſo common a complaint.

Uterine Floodings, in the preſent age, are a more frequent diſeaſe than they formerly were. They ſometimes depend principally on exceſs of

* Dr. Mead, after having taken notice of the bad effects of neglecting blood-letting in the meaſles, obſerves, "that as this peſtilential diſeaſe is of kin to the ſmall-pox, it requires a management not very different from the ſame, which we have recommended in that diſtemper. Blood muſt be taken away in the beginning, according to the age and ſtrength of the patient. It is beſt if poſſible to do this before the eruption of the puſtules, but if they are already come out it muſt however be taken away. For the greateſt danger is an inflammation of the lungs, which cannot be prevented too ſoon. Therefore in the height of the fever alſo, although bleeding was not neglected in the beginning, yet it is ſometimes neceſſary to repeat it. And in the laſt place, at the end of the diſeaſe, when the ſkin is now growing dry and the ſcales falling off, it will be a great error not to open a vein again, that by this means a flux of humors upon the breaſt and inteſtines, and the ſymptoms of a hectic fever and conſumption may be happily prevented."

Dr. Mead, Cap. vi. de Morbillis.

of blood as their cauſe, but oftener on a loſs of tone in the general ſyſtem, and a topical relaxation of the uterine veſſels. In the firſt caſe, moderate bleeding is no inefficacious remedy. In the latter, it encreaſes debility, renders the blood more ſerous, and therefore aggravates the diſeaſe. Hence an evident ſource of abuſe, which ſome have unfortunately diſcovered by experience. When plethora occurs, the peruvian bark and ſtimulants tend to augment the morbid evacuation, to protract the diſeaſe, and to haſten its pernicious conſequences. When weakneſs, with relaxation, is the cauſe, the improper uſe of the lancet concurs with the diſorder, irrecoverably to deſtroy the conſtitution by encreaſing that weakneſs, which, attended with a miſerable train of depreſſive ſymptoms, often terminates in dropſical ſwellings, and in death. It is obſervable, that the diſeaſes peculiar to females have not been ſo thoroughly examined into, and underſtood, as their frequency and importance ſeem to require.

The Catarrh, from the ſituation of our iſland, and from the ſudden viciſſitudes of weather with reſpect to heat and cold, may, with the ſtricteſt propriety, be looked upon as the en-

demic diſeaſe of Great Britain. It is a fatal diſeaſe indeed, not becauſe efficacious means of cure are wanting, but becauſe the frequent occurrence of ſlight attacks, leſſening men's attention to it, has taught them in all caſes too much to neglect the catarrh, till its conſequences are vigorouſly rooted and become ſeverely felt *. The danger of a conſumption, or of the ſpurious peripneumony †, both ſo frequently induced by repeated colds, ſhould deter the inhabitants at leaſt of this country from conſidering the catarrh as a trivial complaint, and one therefore which may be ſafely neglected or committed to the practical ſkill of every illiterate perſon.

* Monro Mil. Diſ. Hoſp. p. 124. "Coughs were very frequent during the winter, and when the weather was wet and cold. They were often accompanied with pains of the breaſt, and when neglected, obſtructions, tubercles, and ſuppurations were apt to form in the lungs, and the diſeaſe to end in a conſumption".

† The ſpurious peripneumony ariſes principally from a relaxation of the mucous glands of the bronchia or air-veſſels. There is an encreaſed ſecretion of mucus, attended with a cough, which is particularly troubleſome in the morning. This diſeaſe, if neglected, or not properly treated, becomes in time obſtinately fixt, and frequently proves dangerous, and even fatal. The patient is ſuffocated with phlegm, which he is not able to expectorate.

perſon. This caution, were its validity univerſally known and acknowledged, might be the means of preſerving numbers of valuable lives.

The catarrh is an inflammation of the mucous membrane of the lungs *; and when it occurs in plethoric habits, complicated with a degree of peripneumonic inflammation, attended with fever, pain in the breaſt, and violence of cough, it urgently requires the immediate operation of veneſection †. The neglect of this evacuation at ſuch conjuncture, leads to all the alarming conſequences pointed out under the article of meaſles ‡. There are few practitioners who have

* Dr. Fordyce's Elem. of Practice, p. 287. "Catarrh is an inflammation of, or greater ſecretion from the mucous membrane of the noſe, eyes, throat, mouth, or lungs, and properly ſhould be divided into different diſeaſes".

Greg. Elements, p. 145. "In the beginning of the catarrhal fever, there is commonly a ſlight inflammation of the mucous membrane with little ſecretion, which becomes more copious and leſs acrid as the inflammation ſubſides."

† Obſervations on the Diſ. of the Army, p. 163.—Monro's Diſ. Mil. Hoſp. p. 125.

‡ Greg. Elements, ſect. 284. "Catarrh is ſeldom dangerous of itſelf when the conſtitution is ſound, and the patient not far advanced in life; but when it is neglected, or continues long, it brings on obſtructions in the lungs, hæmoptoe,

not been witneſſes of too many ſad ſpectacles from this abuſe of medicine. The quantity of blood to be drawn ſhould in this as well as in other caſes, be regulated by the urgency of the complaint.—At the ſame time it is an indubitable fact, that the oppoſite error of repeatedly bleeding without neceſſity, has greatly injured many conſtitutions. The catarrh very frequently attacks delicate relaxed habits, which are rendered highly irritable from exceſs of heat, and unhappily obnoxious to the diſeaſe from the ſlighteſt expoſure to cold. In theſe, as well as in more robuſt conſtitutions, the catarrh is often perfectly pure, unaccompanied with peripneumonic affection, or ſuch other ſymptoms as indicate bleeding. Here veneſection, eſpecially if unneceſſarily repeated, is not only attended with thoſe general bad effects which have been already deſcribed, but renders the patient more liable to a relapſe. In nervous debilitated habits, it tends, eſpecially if the patient be weakened by the too free uſe of ſudorifics, of laxatives, and of emetics, to ſink the conſtitution inſupportably

moptoe, phthiſis pulmonalis, and a diſpoſition to future catarrhs. It ſometimes terminates in violent angina or peripneumony, or induces an inflammation of latent tubercles in the lungs. It often brings on a peripneumonia notha in old people."

ſupportably low, to create dejection of ſpirits, and to induce hyſterical or hypochondriac affections.

I come now to give an example or two of the abuſe and neglect of blood-letting in Nervous Diſorders. For this purpoſe it is intended to mention only a few facts out of the hiſtories of the epilepſy, the hyſterical affection, melancholy and madneſs *.

With reſpect to Epileptic and Hyſterical Diſorders, it is obſervable, that among a variety of prediſpoſing cauſes, two are principally to be guarded againſt; I mean plethora † and debility. Both often occaſion a morbid mobility of habit, which tends greatly to induce thoſe complaints. When the plethoric ſtate prevails, blood-

* The abuſe of blood-letting might have been mentioned in the apoplexy, palſy, hypochondriaſis, and many other nervous diſorders. For, in theſe, bleeding is often omitted where it was indicated, and employed where it was improper. When the conſtitution is plethoric, bleeding is indiſpenſable in theſe complaints, eſpecially in the apoplexy and palſy. It ſometimes gives very great relief in hypochondriac diſorders. But the numbers of nervous complaints are ſo great, that it would be far beyond the deſign of the author to enter minutely into this ſubject.

† Vid. Van. Swiet. Comm. in Aphor. p. 1075.

blood-letting is a promiſing means of relief *, but when debility is the cauſe of the diſeaſe, that evacuation always encreaſes its violence. It is often difficult to draw the exact line of diſtinction between theſe two oppoſite cauſes, which frequently approach each other ſo nearly as to require the acuteſt diſcernment to aſcertain with accuracy their ſeparate action. An undiſtinguiſhing practice in ſuch caſes muſt evidently bear upon the face of it the plaineſt marks of abſurdity. Yet ſuch undiſtinguiſhing practice is ſometimes apparent even to the moſt ſuperficial obſerver. Errors too in caſes ſo obvious as hardly to leave room for the poſſibility of a miſtake in relation to the cauſes of plethora or debility, have frequently been committed by drawing blood too freely or in too ſmall a quantity.

Hyſterical Complaints, even in the fulleſt habits, may be treated with more moderate bleeding. But the epilepſy, dependent on plethora, requires large evacuations, and admits of little relief from weak irreſolute practice.

One

* River. Prax. Med. cap. vii. p. 22. Poſtea ſi plenitudinis notæ appareant, aut æger ſit ſanguineo temperamento præditus, phlebotomia erit celebranda.

One diſtinction I would further add. There are obvious reaſons for believing that a part of the ſyſtem may be too copiouſly ſupplied with blood, while the other parts are evidently under a ſtate of inanition *. Or in other words, the natural balance of the circulation may, in conſequence of the occurrence of topical determinations of blood to particular parts, not be equably maintained. Such a determination to the brain is on very juſt grounds ſuppoſed by Dr. Cullen to be no unfrequent cauſe of epileptic fits; though, at the ſame time, the general ſyſtem be neither ſtrong nor plethoric. Theſe

* Some years ago I had under my care a caſe of palſy, where there was the ſtrongeſt evidence of topical congeſtion in the head, and great emptineſs of the general ſyſtem. A lady, twenty-five years of age, who had led a very ſedentary life, and whoſe conſtitution was extreamly weak, was ſeized with a palſy on the right ſide of her neck, in conſequence of which her head continually inclined to the left ſide. Her pulſe was very weak and irregular. Her appetite but indifferent. She was ſubject to violent head-achs, and an uncommon pulſation in the arteries of the head, which frequently diſturbed her reſt. When the pulſation of the arteries in the head was the ſtrongeſt, her paralytic affection was the moſt troubleſome. By the uſe of the bark, topical bleeding, bliſtering, a moderate diet, and regular continued exerciſe, ſhe was reſtored, in the ſpace of three months, to a perfect ſtate of health.

Theſe caſes unfortunately are very liable to be miſtaken. But if the cauſe be accurately aſcertained, and a judicious method of treatment ſpeedily adopted, the patient will ſometimes find himſelf unexpectedly freed from the alarming attacks of ſo terrible a complaint. In ſuch caſes of topical congeſtion in the head, with a feeble pulſe and great weakneſs, general bleeding cannot be uſed with impunity; but topical bleeding, prudently employed, is very conducive to the cure of the diſorder. The management of ſuch a caſe is ſo extremely nice and difficult, that it need not raiſe our ſurpriſe to find the cauſe of it frequently overlooked and neglected, till the epilepſy by habit is become irremoveably fixt.

We proceed to obſerve how greatly the lancet has contributed to enhance the dreadful ſufferings of the Unfortunate Lunatic. We leave it to caſuiſts and philoſophers to expatiate at large on the inhumanity of thoſe men, if they deſerve the appellation, who, from mercenary views, conduct theſe unhappy creatures to a private mad-houſe, and then, under the ſpecious pretence of adminiſtering to their relief, bleed them till nature exhauſted ſinks under the diſcharge.

Me-

Melancholy generally takes place in the melancholic temperament; madneſs either in the melancholic or in the ſanguine. In the melancholic, both diſeaſes alternately prevailing, ſometimes form a moſt unhappy complication. In a fit of madneſs, the brain evidently appears to be in an excited ſtate, ſimilar in ſome degree to what occurs during the violence of anger. Hence may be explained the uncommon ſtrength of lunatics, with their almoſt incredible power of reſiſting ſleep and hunger *, as well as the ſedative effects of cold, opium, and other narcotic remedies. When the violence of the fit is abated, the nervous energy ſeems ſunk and depreſſed. Theſe two oppoſite ſtates of the ſyſtem are very properly comprehended by Dr. Cullen, under the general terms of Excitement and Collapſe; terms not intended for the concealment of fallacious theory, but only to be expreſſive of indubitable facts †.

Various topical affections of the brain, as abſceſſes, effuſions, preternatural oſſifications, &c. have been found on diſſection to be the evident cauſes of melancholy and madneſs. Af-

 fections

* Van Swieten in Aphor. 1120.

† Cull. Inſt. Med. § cxxx.

fections very ſimilar to theſe have alſo been frequently known to excite vertigo, pain of the head, apoplexy, palſy, epilepſy, fatuity, and the like ſtubborn maladies *. How ſuch apparently ſimilar cauſes are able to effect ſuch great diverſity of appearance, is a problem which has hitherto been found too difficult for human penetration to ſolve. Yet no one doubts that madneſs frequently occurs when not induced by ſuch fixt topical affections. The alarming ſuddenneſs of an attack, and the diſeaſe continuing for a ſhort time and then perfectly diſappearing, ſufficiently evince the validity of this doctrine. Diſſections too indiſputably confirm it.—The art of medicine may relieve even in thoſe caſes of fixt topical affection. In others ariſing from plethora, it may aſſiſt to forward and complete a cure which nature alone could never have made. When the juſt management of the lancet is not able to mitigate the rage of madneſs, this is frequently too probable a ſign of the obdurate nature of the cauſe. How often that management is not juſt, I will not pretend to determine. Let it ſuffice on this ſubject to obſerve, that when madneſs appears in the ſanguine temperament,

* Vid. Gregory's Elem. § 251.—Morgagni de Sed. & Cauſ. Morb.

perament, nothing but ſudden, copious, and repeated bleedings can moderate or remove an excitement, which is the higheſt that is known to human nature. The plethoric ſtate of the ſyſtem and the ſanguine turgeſcence of the brain, calling loudly for the lancet, will aſſiſt in regulating its uſe *. At the ſame time, the principles of the inſtitutions of medicine will remind the phyſician, that bounds are fixed to his practice, beyond which, if he raſhly venture, the conſequence may be fatal to his patient. When melancholy riſes to madneſs, blood-letting undoubtedly becomes a neceſſary means of relief †; but in ſuch a caſe, the circumſtance of the temperament claims our attention, and requires us to be ſomewhat more ſparing of the vital fluid; otherwiſe, when the fit of madneſs is over, the gloomy miſeries of melancholy may return with redoubled violence.

* Mania vero enata in robuſtis, vegetis, floridæ etatis, plethoricis, calidis, ſanatur iiſdem mediis, ac ſpecies epilepſiæ; miſſione ſanguinis iterata; purgatione forti, &c. — Boerh. Aphor. 1127.

† Vid. Boerhaave Aphor. 1115. — Symptomata leniendo per venæſectionem, &c.

SECTION II.

OF

EMETICS AND PURGATIVES.

EMETICS and PURGATIVES are remedies of an active nature*. The effects of their abuſe are frequently dangerous and ſtriking. The imprudent uſe, as well as the neglect of them, is ſometimes unexpectedly attended with fatal conſequences. Omitting the relation of ſingle caſes, we ſhall dwell principally on the conſideration of thoſe facts, the knowledge of which promiſes to be of the moſt general utility.

Emetics

* In univerſum itaque hic abuſus nocet ſanis, præſidia adverſæ valetudinis in ſecunda conſumendo, adſuetudinem cum menti, tum corpori, inducendo, qua tandem neceſſaria reddantur, particulis alienis, indomabilibus, ſuccos inficiendo, vi non propria partes laceſſendo, fatigando, regulares naturæ motus interturbando, ejuſque penſum ingeſta materie non alibili aggravando, &c. Pathol. Inſt. § 484.

Emetics excite ſickneſs, attended more or leſs with a ſenſe of anxiety and oppreſſion. After the ſickneſs has continued ſome time, an effort is made in the conſtitution to expel the offending ſubſtance; which therefore is at laſt evacuated by the action of vomiting. To complete this effort of the ſyſtem, a full inſpiration is made; the pylorus * is ſpaſmodically cloſed; the natural periſtaltic motion of the ſtomach is inverted; the midriff is relaxed; and the abdominal muſcles are thrown into ſtrong convulſive action †. Hence various kinds of crudities, of noxious and putrid matters, are happily removed. The gaſtric fluid is ſecreted in greater quantity than uſual. The biliary and pancreatic ducts are emulged, and the ſecretion of the liver and pancreas augmented, along with that of the glands of the ſuperior part of the inteſtinal tube. Thus fluids which ſtagnated, are put in motion; morbid congeſtions and accumulations are prevented. The excretion

* Cheſelden's Anatomy, p. 151. "The ſtomach has two orifices, both on its upper part; the left, through which the aliment paſſes into the ſtomach, is named cardia; and the right, through which it is conveyed out of the ſtomach, is named pylorus."

† Vid. Haller Elem. Phyſiologiæ, tom. 6, p. 281.—— Hunter's Lect. on Anatomy.

tion of mucus from the lungs is promoted. The general abſorption of the ſyſtem is encreaſed. The circulation is rendered freer; the blood diffuſed more equably over the ſyſtem; and topical determinations in many inſtances leſſened or removed. The circulation being reſtored to the ſurface, ſpaſmodic contractions of the cutaneous veſſels are efficaciouſly reſiſted, if not reſolved; and the cuticular and pulmonary exhalations very ſenſibly promoted. A commotion alſo is excited in the nervous ſyſtem, which is often highly ſalutary in nervous diſorders *.

Theſe effects are conſequent on the action of vomiting excited by an emetic, particularly by the antimonial emetic tartar. But it may frequently be adviſeable to exhibit remedies of that nature in ſuch divided doſes, as only to produce a degree of nauſea; which being kept up for ſome time, tends powerfully to induce a relaxation of the ſurface, to ſolve cutaneous ſpaſm, and to act as a mild and ſafe ſudorific. Part of the emetic too, paſſing out of the ſtomach, may operate gently on the bowels and become a very proper laxative. Such operation may often

* Lect. on Mat. Med. p. 460.—Elem. of Therapeutics, part II. chap. I.

often be obtained by the uſe of Dr. James's powder; but ſtill more ſteadily, by that of emetic tartar, a ſafe and efficacious antimonial, poſſeſſed of almoſt every deſireable quality. Somewhat ſtrange indeed it ſeems, that ſo valuable a febrifuge, and the modes of its adminiſtration, ſhould not be more generally known. When the uſe of a remedy has been aſcertained by the experience of the ableſt phyſicians, and generouſly made public to the world, one cannot but think that to be ignorant of the leading facts concerning it, argues at leaſt great inattention.

When taken into the ſtomach, Purgative Remedies by their action on the alimentary canal, generally ſtimulate and encreaſe the periſtaltic motion. Hence the contents of the firſt paſſages are evacuated; whether they were become hurtful to the containing parts from their accumulated quantity, or from an acquired acrimony in conſequence of having proceeded too far in the latter ſtages of fermentation. The ſecretion from the numerous exhalant arteries, opening into the cavity of the inteſtines, is greatly encreaſed. The mucous glands, whoſe uſe it is to ſeparate from the blood a mild unc-

tuous

tuous fluid to lubricate and defend from injury the ſenſible internal coat of the bowels, are made copiouſly to ſecrete their mucus. Other ſecretions too, ſubſervient to the purpoſe of digeſtion, are augmented by the ſtimulus of the remedy. I mean the ſecretions of the bile, the gaſtric fluid and the pancreatic juice. Conſidering the ſize of the larger ſecretory glands contained in the abdomen, and the immenſe number of ſmaller ones every where crowded between the coats of a long tract of inteſtine, together with an infinity of exhalant arteries, it is obvious that by the action of purgative remedies, a conſiderable evacuation of fluids, eſpecially of the ſerous kind, may readily be obtained. Hence the utility of ſuch remedies in caſes of abdominal congeſtion, of fulneſs of the ſyſtem, or of topical determinations of blood, where ſuch an evacuation may be required. It ſhould at the ſame time be always remembered, that the diſcharge in conſequence of the action of purgatives, proceeding from ſuch a variety of ſecretory organs, will be ſlowly made, and conſequently unfit for producing that ſudden relaxation of the ſanguiferous ſyſtem, which is often found ſo highly beneficial in the cure of diſorders. Where that

effect is principally intended to be produced, blood-letting is preferable to purgatives, and is not to be ſuperſeded by their uſe. But when from debility the lancet cannot be employed with ſafety, and ſtill ſome evacuation ſhall be thought neceſſary, gentle purging may frequently be excited to advantage *.

After this general enumeration of the effects of emetic and purgative remedies, I proceed briefly to give ſome examples of the Abuſe and Neglect of them.

The Unneceſſary Uſe of ſuch medicines is notorious. The freedom with which they are ſometimes employed on the moſt trivial occaſions, would almoſt perſuade one to believe, that ſome were of opinion, they might be exhibited not only without danger, but with abſolute impunity. On the contrary, both emetics and purgatives of every different kind, are unnatural to the human conſtitution. They are capable of conſiderably exciting the action of the alimentary canal, and of inducing a ſtate of debility, which may render it unable to diſcharge the

* Lect. on Mat. Med. p. 474. Diſſert. Inaug. de Feb. Cont. Medend.

the neceſſary functions of the œconomy with eaſe, conſtancy, and vigor †.

The habit of taking needleſs emetics and laxatives, is ſo pernicious in itſelf, that not a ſingle word can plauſibly be urged in its defence. In many caſes, ſuch remedies indeed may only operate ſlowly in deſtroying the tone of the alimentary canal; but they will at laſt be found ſufficiently powerful to deſtroy it.—Can the convulſive motions of the ſtomach, needleſsly excited by an emetic, be borne with impunity? —Can the periſtaltic motion of the bowels, daily admit of the unnatural ſtimulus of an aloetic pill, and not ſoon diſcover ſigns of its pernicious effects *? Will it not conſequently

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† Lect. on Mat. Med. p. 475. "As repeated emetics weaken the ſtomach, ſo cathartics, often renewed, diminiſh the tone of the inteſtines and their ſenſibility alſo."

Gaub. Pathol. Inſt. p. 244. Evacuantium vero, uti frequentior abuſus, ita effectus peſſimi. Obſunt certe eo, quod aut plus juſto ejiciant, aut cum inutili etiam utile, quod retineri debebat, aut nimis præcipitanter, aut tempore modove incongruis, aut non ſuis locis. Nocent et emunctoriis ſtimulo, attritu, dilatatione, anaſtomoſi, infirmatione, &c.

* It is not meant to affirm that aloes are more pernicious than other purgatives in the ſame circumſtances. The unneceſſary

become ſlower and weaker than natural; and habituated at length to the ſtimulus of aloes, be found inſufficient without it to perform the functions of nature?—In ſhort, all ſuch remedies, whether purgative or emetic, are, when unneceſſarily employed for any length of time, very active in producing loſs of appetite, flatulence, indigeſtion, acidity, and ſpaſmodic pains of the ſtomach or bowels *. When the uſe of them is intermitted, obſtinate coſtiveneſs is very liable to follow. This laſt ſymptom, in ſuch a weak ſtate of the alimentary canal, augments the ſeverity of all the others, which the unſeaſonable uſe of medicine had contributed to induce. Theſe remedies are found ſpeedily to give a temporary relief to thoſe ſymptoms, which they not only at firſt occaſioned, but powerfully continue ſtill to encreaſe. Deceived by ſuch effects, the patient, too generally ignorant of the firſt cauſe of his diſeaſe, reſts often fully ſatisfied with that method of treatment, which he will ſometimes even attempt to

ceſſary uſe of all active remedies of this nature is hurtful, and therefore to be avoided.

* Sea water, Harrogate water, and other mineral waters, poſſeſſed of a purgative quality, are often uſed without the leaſt neceſſity, and with evident bad effects.

to defend with arguments that appear to him convincing, but which are fallacious and undeciſive. No prudent practitioner of medicine would ever preſume to order either a purgative or an emetic, without the cleareſt evidence of its neceſſity, and the faireſt probability of removing a greater evil than the remedy itſelf is capable of producing.

It was obſerved that, after the exhibition of an emetic, the mucus contained in the cavity of the ſtomach, and in its mucous glands, is evacuated; and that from the inverted vermicular motion of the ſuperior part of the ſmaller inteſtines, a quantity of bile, eſpecially if the vomiting has been ſevere, is generally thrown up *. A practitioner, who is ignorant of the natural copious ſecretion of mucus in the ſtomach, and of the effects of the inverted action of that organ, occaſioned by the medicine, ſuppoſes thoſe appearances of mucus and bile to be in every caſe truly morbid, and confeſſes himſelf glad to find ſuch matters ſo efficaciouſly removed. He ſhould have underſtood, that an emetic will often produce a ſimi-

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* Haller Elem. Phyſiol. tom. vi. p. 307, et vulgo in omni vomitu, ſub finem bilis ſequitur.

lar diſcharge from ſtomachs the moſt ſound and clear of all impurities. It is indeed undeniable, that an unnatural quantity of mucus or bile is ſometimes found in the ſtomach; yet, doubtleſs, it is very often ſuppoſed to have exiſted there without any foundation at all *.

In like manner a natural coſtiveneſs, attendant often on the moſt robuſt conſtitutions, and indicating ſtrong digeſtion with vigorous abſorption by the lacteal veins, is miſtaken for a morbid ſtate, ſuppoſed to ariſe from a defect of the periſtaltic motion, which is to be obviated by aperient remedies †. In conſequence of ſuch premature uſe of medicine, health in time is converted into diſeaſe; when in fact it might have been effectually preſerved by ſlight regulations of Diet and Regimen, thoſe moſt important, but much neglected means of preventing diſorders ‡.

We

* Gregory's Lect. on the Practice.

† Robuſtis pauca, quam quotidie ex alimentis parant, fex etiam per multos dies retenta non nocet. Gaub. Inſt. Pathol. § 558.

‡ Neque enim in arte eſt, quas natura conſtituit, omnes ſanitatum differentias coæquare; tutiuſque, quod hac in parte præſtari poteſt, conſentanea vitæ ratione, quam medicamentis obtinetur. Inſt. Pathol. § 482.

We ſhall next ſpeak of emetics and purgatives in diſeaſes, where thoſe remedies are Neglected or Injudiciouſly preſcribed *.

It may be proper here to obſerve, that all the nauſeous acrid ſubſtances, capable of acting as a vomit or a purge, which mankind, traverſing the moſt diſtant regions of the world, could diſcover and procure, have not only been ſucceſſively employed, but induſtriouſly extolled as being pregnant with ſome very ſingular medicinal virtue †. The whole terraqueous globe has been ranſacked to furniſh ſuch rude indigeſtible materials, often indeed not collected without conſiderable labor and expence. Thoſe remedies, forced by the deciſive energy of medical logic into the human ſtomach, have contributed greatly to deſtroy the nervous delicate texture of the alimentary tube, on the tone and

* Hæc ſi vel valentiſſima corpora tandem peſſumdare debent, quanto citius certiſque valetudinarios, debiliores, qui nimis frequenter ex hoc abuſu robur ſibi vani promittunt. Inſt. Pathol. § 484.

† If we read the Diſpenſatories, we ſhall find ſufficient proof for what is here aſſerted.—"It is no difficult matter to ſhew teſtimonies of efficacy, adduced in favour of the moſt inert medicines." Lect on Mat. Med.—

and vigor of which, the health of the whole machine is found ſo eſſentially to depend. Strong draſtic purgatives are numerous, and have frequently been exhibited in an injudicious manner. Before the diſcovery of ipecacoan and emetic tartar, phyſicians ſcarce knew a remedy, on the operation of which as an emetic they could rely with ſafety and ſucceſs. Hence they have been uſed to employ ſubſtances of a very draſtic nature, which the ſtomach could never receive without injury *. But paſſing over that obſervation as pointing out a defect rather than any abuſe of medicine, it may be aſked what can be ſaid in defence of thoſe who, from the unhappy violence of their temper, continue ſtill to prefer in many caſes an emetic of the moſt ſevere and unmanageable action, to one perfectly ſafe and equally (if not more) efficacious? Strong emetics have induced vomiting of blood †. The fibres of the ſtomach by over-diſtenſion, and by the violence of their action during the ſevere operation

* See Neumann's Chymiſtry on the medical effects of antimony, p. 131.——Lewis's Mat. Med. p. 57.

† Neumann obſerves, that "a few grains of the glaſs of antimony ſhall occaſion even mortal convulſions and inflammations." Chym. Works, p. 132.

tion of the remedy, neceſſarily loſe their tone. Both violent purging and vomiting, however induced, not only debilitate the ſtomach and bowels; but by deſtroying the appetite, diſturbing digeſtion, producing a copious evacuation of fluids, and impeding the proceſs of nutrition, they weaken and impoveriſh the whole conſtitution.

In Intermitting and Continued Fevers, gentle emetics and cooling laxatives may be employed with very conſiderable advantage *. They will in ſuch caſes produce moſt of the ſalutary effects, which have been before enumerated, when we were ſpeaking of the general action of emetic and purgative remedies. If the uſe

* Van. Swiet. Comm. in Aphor. 605, 759.

Greg. Elem. of Practice, § 29, 58.

Lind's eſſay on diſeaſes incident to Europeans in hot climates, part iii. chap. 1. p. 233. "The chief objects of attention in all ſuch fevers are the contents of the ſtomach and inteſtines. Upon the patient's firſt complaint, and during the firſt hours of the fever, while perhaps he is only chilly, or complains of alternate fits of heat and cold, the ſtomach and inteſtines ſhould be immediately cleanſed either by a vomit, a purge of manna with tincture of ſena, or by an oily and purging clyſter, after which the patient, eſpecially if the ſkin be moiſt, may immediately take an antimonial draught every ſix hours."

of them be neglected in intermittents, crudities lodged in the firſt paſſages, favor the recurrence of fits; cutaneous ſpaſm of a more obſtinate nature is apt to be formed; the paroxyſms are ſeverer and of longer duration; the peruvian bark is found leſs efficacious; and abdominal obſtructions, ſchirroſities of the liver and ſpleen, ſo frequently fatal by inducing dropſies, are more liable to occur. The diſeaſe by habit gains ſtrength, and produces greater weakneſs and depreſſion of the nervous energy. ——In continued fevers, eſpecially of the putrid kind, a ſimilar omiſſion in not clearing the firſt paſſages, gives riſe to a conſiderable irritation, and an evident encreaſe of every febrile ſymptom *. A diarrhæa too, in conſequence of the neglect, is apt to occur in the progreſs of the fever, which ſinks the patient's ſtrength and ſpirits, and often gives an unfavourable turn to the complaint. If gentle purgatives be omitted in continued fevers attended with plethora, an uſeful means of lowering a morbid exceſs of reaction in the ſyſtem

* Fordyce's Elem. of Practice, p. 147. "The primæ viæ are to be cleared of any offending matter by gentle emetics and laxatives, or gliſters according to the ſtrength of the patient."

tem is unſkilfully neglected *.—It is a fact atteſted by phyſicians of the firſt eminence and authority, that a vomit, particularly emetic tartar, exhibited at the firſt invaſion of a fever, whether it be remittent †, inflammatory, nervous or putrid ‡, has finally put a ſtop to its progreſs. The operation of the remedy in ſuch caſes is variouſly explained, but the moſt plauſible conjecture ſeems to be, that it operates by removing the contagion from the ſtomach, by determining to the ſurface, and by preventing the formation of cutaneous ſpaſm, which giving conſiderable irritation to the heart and arteries, favors reaction and the continuance of the fever.

* Hipp. Aphor. 2. Sect. iv. Ἐν τῆσι φαρμακείῃσι τοιαῦτα ἄγειν ἐκ τοῦ σώματος, ὁκοῖα καὶ αὐτόματα ἰόντα χρήσιμα· τὰ δ' ἐναντίως ἰόντα, παύειν.

† Monro Diſ. Mil. Hoſp. p. 169. "In ſome caſes when given early, the antimonial operated both by ſtool and as a diaphoretic, and removed the fever."

‡ Pringle's Obſervations on the Diſ. of the Army, p. 306. Dr. Lind too in his treatiſe on fevers is of the ſame opinion. Dr. Gregory obſerves that "the paroxiſm of an intermittent may be prevented by gentle emetics, particularly antimonials, given ſo as only to excite a nauſea." Elements of Practice, §. 59.—"Exerciſe in the open air, and a proper regimen, with a gentle emetic and laxative, and temperate bathing, will often prevent the acceſſion of fevers when threatened." Ibid. §. 36.

On the other hand, thoſe medicines, if they be uſed too freely in this order of diſeaſes, become hurtful and dangerous; they protract the duration of the fever, and ſometimes even render it fatal *. In very ſanguine habits, the imprudent exhibition of an emetic, without the previous uſe of the lancet, has been ſaid in ſome inſtances to have proved fatal in conſequence of rupturing the veſſels of the brain †. In nervous fevers, or wherever great debility prevails, the operation of emetics, too frequently repeated, has, by fatiguing the patient, encreaſed the violence of the ſymptoms ‡. Copious purging, in ſimilar caſes, has ſometimes brought on ſuch ſudden proſtration of ſtrength, as to ſink the patient irrecoverably low. In all thoſe critical ſtages of fevers, where life ſeems held only by the ſlendereſt thread, the moſt minute caution is required on the part of the phyſician. He ought indeed to be wiſely

* Hipp. Aphor. 25. Sect. i. Ἢν, οἷα δεῖ καθαίρεσθαι, καθαίρωνται, ξυμφέρει τε, καὶ εὐφόρως φέρουσι· τὰ δ' ἐναντία, δυσχερῶς.

† This fact has been frequently aſſerted by phyſicians. Lectures on the Materia Medica p. 465. "Emetics are very dangerous in congeſtions of the head. Vomiting may be ſuppoſed to puſh ſuch to the utmoſt violence, and to cauſe a rupture of the veſſels," &c.

‡ Obſervations on the Diſ. of the Army. p. 307.

wiſely bold; but if he happen to be raſh, his ill-judged method of practice will very often be followed with the moſt gloomy cataſtrophe.

With regard to the choice of emetics, ipecacoan is both a ſafe and valuable remedy; quick in its operation, and well adapted to the purpoſe of evacuating the contents of the ſtomach. It is leſs proper to be given in ſmall doſes, to excite and maintain for ſome time ſickneſs without vomiting. — Tartar emetic, a compound of antimony and the tartarous acid, is perfectly as ſafe *; capable of being made ſlower in its operation, and well fitted for exciting nauſea. It operates with great efficacy, and with a fairer probability than any other emetic of removing entirely the ſymptoms of the fever, or of rendering them milder, and diminiſhing the original danger of the diſeaſe.

The

* Dictionnaire de Chymie, tom. iii. p. 421. Tartar Emetique. C'eſt ainſi qu'on nomme la combinaiſon de l'acide tartareux avec la partie metallique de l'antimoine a demi depouillee de ſon principé imflammable; c'eſt la meilleure et la plus usitée de toutes les preparations emetiques de l'antimoîne, parce que la partie metallique de ce minêral, qui eſt la ſeule emetique, y eſt dans l'etat ſalin & de diſſolubilite parfaite dans les liqueurs aqueuſes.

The ſtate of a fever may indicate nauſeating doſes of emetic tartar, to determine the circulation to the extreme veſſels, and acting as a mild relaxant, to promote a free univerſal perſpiration in caſes where great proſtration of ſtrength would evidently contraindicate full vomiting.

For a ſimilar intention, Dr. James's powder has often been exhibited with undeniable ſucceſs; tending, when its operation does not diſappoint the practitioner, to determine to the ſurface more ſteadily than even emetic tartar. But as it is an antimonial, not in a neutral ſtate, its operation is confeſſedly much more uncertain, depending on the quantity of acid at that time contained in the ſtomach, by which it muſt be diſſolved and neutralized, before it becomes active, and is fitted to produce its proper effect. Hence, if the acid contained in the ſtomach be too weak, or in too ſmall a quantity, the remedy undiſſolved may paſs inert. But the antimonial, if it be acted upon and perfectly neutralized by a ſuperabundant acid, may operate too ſeverely. Or, what is of no very unfrequent occurrence, if doſe upon doſe be accumulated, and afterwards an acid taken, or aceſcents become acid by fermentation,

and

and the whole quantity of the antimonial be at once rendered active, its operation may be violent to a fatal excefs. An eminent and accurate phyfician of extenfive practice in the city of London, affured me, that, in feveral inftances, he had feen Dr. James's powder remove almoft every fymptom of a fever; and yet the patient, from the violence of its action, expired a few hours after from mere debility. Whereas tartar emetic, though liable to a little variation in point of activity, owing chiefly to the different degree of folubility in the antimonial from which it is prepared, is on the whole found, when adminiftered in a proper manner, very certain in its effects. Its operation is uninfluenced by the precarious ftate of acidity in the ftomach. A few trials determine the activity of a certain quantity prepared at one time; and this point being afcertained, the dofe may eafily be adjufted accordingly.

With regard to the choice of laxatives in fevers, thofe of a mild cooling nature fhould always be preferred, fuch as the neutral falts, manna, fena, rhubarb, cream of tartar, caffia, tamarinds *, &c. All heating ftimulating purgatives,

* Fordyce's Elem. of Practice, p. 147.

gatives, instead of lessening, evidently add to the febrile irritation of the system; and by their beneficial, do not compensate for their pernicious effects.

We shall next consider the abuse and neglect of these remedies in Local Inflammations.

The neglect of purgatives in the different species of Inflammations of the Head, is often particularly improper. By producing an evacuation of serous fluids and determining the blood to the abdominal viscera, they in some degree make a revulsion from the head; and hence are considered as an useful remedy in the primary inflammations of the brain, the throat, the organs of sight and of hearing. But it ought to be remarked, that in slight inflammations of the eyes and throat, cathartic potions are often exhibited much too freely. By this means they concur with the lancet, as was before intimated, in shaking the very foundation of health. In the gangrenous angina*, as well as in the erysipelas of the face, purgatives, where the habit is weak and the pulse feeble, are

* Fothergill on the sore throat attended with ulcers, p. 42.

are frequently found hurtful, rendering the diſeaſe more dangerous and alarming. In the ſymptomatic phrenſy, occurring at the decline of nervous, putrid †, and peſtilential fevers, purging, in conſequence of the evacuation induced, is often productive of the moſt fatal effects. In ſuch a caſe, the mildeſt laxatives can hardly be given with ſafety. But on the contrary, the ſymptomatic phrenſy, occurring in the inflammatory fever and at the beginning of the ſynochus, admits frequently of the greateſt relief from the prudent uſe of purgatives.

Emetics exhibited in the inflammation of the brain, as well as in that of the eyes, have, in conſequence of exciting violent vomiting, proved prejudicial. Whereas divided doſes of emetic tartar, not producing vomiting, have, even in thoſe complaints, when accompanied with general fever, been frequently found productive of ſalutary effects *.—The propriety of

 emetics

† See obſervations on the diſeaſes of the army, p. 301. "The moſt unexpected appearances were abceſſes of the brain," &c. Later diſſections alſo afford many examples of a ſimilar nature.

* See Gregory's Elements of Practice, §. 252, where the uſe

emetics in many cases of angina is obvious. They have often been found highly serviceable in the croup*, and in the sore throat of the ulcerous

use of antimonials is recommended in the phrensy. And Dr. Hope, professor of Botany at Edinburgh, and physician to the Royal Infirmary, assured me that he had frequently found antimonials useful in ophthalmia, and that even gentle vomiting was sometimes useful.

* Dr. Cullen, in his Lectures on the Practice, recommended the use of emetics in the croup. He did this on the authority of my ingenious friend Dr. Crawford, who had very frequently been himself a witness of their utility. Dr. Crawford, in his Inaugural Dissertation, has given a full and accurate account of the use of emetics in the croup. Vid. Disquisit. Med. de Cynanche Stridula, p. 31. "Aliqui adhuc, perstante inflammatione, emetica laudibus extulerunt: Clar. Homius vero autumat, se nunquam illa vidisse proficua; e contrario, suspicatur potius nocere, muci secretionem in pulmonibus incitando, absque illam expellendo, "which is, says he, the very circumstance that, if possible, we ought to guard against:" Sed si secretio etiam muci augeatur emeticis, attamen in principio morbi, cum tantum periculi ægro ex membranæ ortu conflctur, emetica adhibere utile sit, quo impediamus, ne oriatur; nam si emetica ad membranam expellendam prosint, certe etiam proderunt ad expromendam materiem ex qua conficitur membrana; aliter fieri non potest, quin plus minus expromptus erit ob inspirationem solito grandiorem inter nauseandum, et vehementiorem expirationem quæ inter vomendum contingit. Theoriæ vero obsistit experientia, et emetica utilia esse confirmat, quamvis, dum

ulcerous kind. An accumulation of viſcid phlegm in the throat, not unfrequent in anginas, has, particularly in the eryſipelatous,

dum quæ geruntur in vomitione ſi conſideremus, aliter eſſe videretur, quum in quoque molimine vel tuſſiendi, vel vomendi, vel flendi, partes quas occupat morbus agere impelluntur; hos autem vanos terrores diſcuſſit experientia. Supra notavimus cynanchen ſtridulam maxime graſſari in orientalibus locis Perthſhire, vel in illo terræ tractu Carſe of Gowrie vocato; et hic ea eſt praxis, ut in primo morbi inſultu emetica adhibeantur, et quandocunque morbus nocte gravius derepente adoriatur, et quoque ante ſanguinem miſſum, vel alvi ſubductionem, et tuto, optimoque cum ſucceſſu; pauci enim infantes morbo interficiuntur, quibus tempeſtive adhibita fuerunt emetica. Curationem hujus morbi vomitu confirmat Tournefort, cum loquatur de morbo in Oriente, cui nomen dedit Peſtes Infantum; eſt enim, ut ille dixiſſet, apud imum gutturis carbunculus: Cum adoriatur, quamprimum adhibendum eſt emeticum, et etiam repetendum. Qualiſqualis ſit operandi modus, ex optima tamen auctoritate certior factus ſum, hanc curationem felicem, nec periculoſam, eſſe. Cognoſcimus emetica, ante intermittentis paroxyſmum data, acceſſum illius arcere, et vehementis pertuſſis vomitione finiri inſultus: Medicamentum, quo fere utuntur loci ſupra memorati incolæ, eſt ipecacuanha ingrata; et inde vix illam deglutient infantes; quare tartarum emeticum anteponere volui; qui, cum ſapore et odore ferme careat, facilius adhibetur: Porro, vel poſtquam vomitio pleno rivo excitata fuiſſet, operæ pretium foret, hoc remedio in doſibus ſolum nauſeam moventibus uti, qua via tanquam

been the cauſe of ſuffocation, which accident, in ſome caſes, might have been fortunately prevented by the well-timed exhibition of an emetic, promoting the ſecretions of thoſe parts, and clearing away the obſtructing matter ‡. Yet it is worth remarking, that, in the common inflammatory angina, vomits are generally im-

diaphoreticum ageret; ad quod conſilium ſudoriferis ſtimulantibus, ut calefacientibus, anteferendus eſt. Et jam obſervatu dignum eſt, poſſe magnum commodum ex ſudore ſic allato provenire; quandoquidem frigus ſecretionem muci magnopere auget, qua morbum graviorem reddat. Etmuller, dum de aſthmate infantum, quod nonnulli cynanches ſtridulæ aſſimilavere, vomitum laudat, quo provocato, infantes liberantur. Ad eandem intentionem, qua tartarum emeticum ægro præbere volui, abſolvendam, alia lenia ſudorifera, ut vinum emeticum, in parvis doſibus, ſalia neutra adhibere poſſumus."

‡ Huxham on the Ulcerous Sore Throat, p. 290. "If nauſea and vomiting were urgent, I ordered a gentle emetic, eſpecially for adults, which was ſo far from aggravating the pain of the throat, as might be imagined, that it greatly relieved it; nay, in children, it was often neceſſary to make them puke frequently, with a little oxymel. ſcillit. eſſence of antimony, or the like, otherwiſe the vaſt amaſs of tenacious mucus would quite choak them."

Gregory's Elements of Practice, §. 281. "The general indications of cure are the ſame as in putrid fevers. Bleeding and cathartics do miſchief; gentle vomits and bliſters are occaſionally of uſe."

Percival's Eſſays, tom 1, p. 382.

improper. The ſwelling of the tonſils and adjacent parts, frequently ariſes to ſuch a height, and ſo ſtraitens the fauces, as to render the action of vomiting highly irritating and unſafe †. But ſmaller doſes of an emetic to determine to the ſurface, may, even in this diſeaſe, as well as in every other ſpecies of angina, be for the moſt part advantageouſly uſed.

In Pleuriſies and Peripneumonies, the prudent practitioner will not omit to keep the body open by the moſt cooling laxatives. He will at the ſame time be anxious not to check or prevent a ſalutary expectoration by inducing too copious an evacuation from the inteſtinal tube.—Nauſeating doſes of emetic tartar are at any period of thoſe diſeaſes a valuable remedy. Yet I cannot agree in opinion with a late ingenious writer, who aſſerts that antimonials are ſpecific in the pleuriſy, but it is to be feared, without ſufficient ground for his aſſertion *.—Gentle vomiting

† This obſervation ſometimes holds good even in the ulcerous ſore throat, when the ſwelling of the tonſils runs very high.

* Antimonials ſhould not be conſidered as ſpecific in the pleuriſy, till they are found ſo by experience; and the term ſpecific ſhould not be uſed in a looſe undetermined ſenſe.

For

miting after bleeding may be ſafely and often advantageouſly employed, at the beginning of the pleuriſy and peripneumony when the ſymptoms are mild, or towards their decline when the violence of the ſymptoms being abated, expectoration is viſcid and defective, or the lungs obſtructed with phlegm †. But in other ſtages of thoſe diſorders vomiting cannot be uſed with ſafety, on account of the ſeverity of the pain, the obſtruction of the pulmonary circulation, and the difficulties of reſpiration.

In the Inflammation of the Bowels, the irritation of the mildeſt laxative ſhould be cautiouſly avoided, where the beneficial operation of an injection can be effectually obtained ‡. But if in this attempt the practitioner be diſappointed,

For there is danger leſt ſome ſhould be led into error, by truſting too much to antimonials, and neglecting the uſe of more powerful remedies.

† Greg. Elem. of Practice, §. 325. "To promote any critical evacuation or metaſtaſis, but particularly to promote expectoration, by emetics, antimonials," &c.

Huxham on Fevers, p. 203. "But I have ſeveral times given an emetic in peripneumonies with great advantage, when the expectoration hath been ſuddenly ſuppreſſed, and the difficulty of breathing greatly augmented."

‡ Ford. Prac. 251.

appointed, recourſe muſt immediately be had to the uſe of gentle aperients taken into the ſtomach. The neglect of proper laxatives, or the employment of ſtimulating cathartics, have frequently been attended with the moſt alarming effects. The caſtor oil at ſuch a conjuncture is a laxative, which from its mildneſs is ſometimes found peculiarly adapted to the complaint. But if this and other laxatives of a mild ſort ſhould fail, the exigency of the caſe, with obſtinate conſtipation, will demand the uſe of purgatives of a more active nature †.—Vomits in this diſeaſe can never be employed without the greateſt hazard. If preſcribed through ignorance, or given by miſtake, they tend to haſten the progreſs of inflammation, and ſuddenly to induce fatal gangrene.

In a fit of the regular Gout, gentle emetics, by removing crudities, by ſupporting the tone of the ſtomach, and by mitigating the attendant fever,

† Pringle's obſervations, p. 150, on inflammations of the inteſtines. "Next to bleeding, the principal part of the cure depends on opening the body, &c. Sir John Pringle afterwards particularly recommends for this purpoſe, ſmall repeated doſes of the ſal catharticus amarus.

fever, are often of ſingular utility. The omiſſion of them therefore in many caſes proves hurtful. It ſhould be obſerved however, that the too liberal uſe of emetics would abſolutely have a contrary effect, by weakening the ſtomach and haraſſing the whole conſtitution.—In the intervals of the gout, occaſional emetics in caſes of foulneſs of the ſtomach may be employed with advantage *.—But when the diſeaſe is become irregular, if it attack any internal vital part with inflammation, as the brain, the lungs, or the inteſtines, much nicety is requiſite in regard to the management of emetics. The obſervations I have made when ſpeaking of the abuſe of emetics in thoſe particular ſpecies of inflammation, are perfectly applicable in ſuch anomalous caſes of gout.—If the irregular gout terminate in a fit of ſpaſmodic aſthma, an emetic given at the height, or at any period during the violence of the diſeaſe, is a very precipitate and dangerous practice. At other times, however, when the anxiety is abated, and reſpiration free, an emetic, particularly an antimonial one, may be preſcribed in ſuch a manner, as greatly to relieve.—But in gouty ſpaſms

* Greg. Elem. of Practice, § 400.

ſpaſms of the ſtomach and bowels, emetics during the ſeverity of an attack, can have no place at all with tolerable ſafety.—Yet in many caſes, both of the regular and the anomalous gout, nauſeating doſes of tartar emetic judiciouſly given, are well fitted for ſhortening the duration, and mitigating the violence of the complaint. In the regular gout, they may be exhibited moſt advantageouſly juſt before an exacerbation of the fever and the return of ſevere pain, which is frequently preceded by a ſhivering and a ſenſe of coldneſs.

The free uſe of purgatives cannot be ſafely admitted even in the regular inflammatory gout, though the conſtitution of the patient be vigorous and full *. In caſes of the irregular or wandering gout, where the patient is advanced in years and the conſtitution debilitated, purging ought to be moſt ſcrupulouſly avoided. In conſequence of its power of deſtroying the tone of the alimentary canal, it is ſingularly injurious in thoſe ſpecies of the complaint. Yet no one denies that mild aperients are often

* Neque purgationem per ſuperiora, inferiorave tantum præſtare, quantum vulgo ſperari ſolet; excitare ſæpe tumultum liquidi nervoſi, ſubducere liquidiora, labefactare virtutem expellentem. Boerhaave's Aphor. 1274.

a neceſſary remedy, as well in the anomalous as in the regular gout *; and that the neglect of them gives riſe to crudities in the firſt paſſages, to an encreaſe of the fever, and to obſtinate coſtiveneſs, which laſt ſymptom ſometimes occaſions hemorrhoids, colic pains, or even inflammations of the inteſtinal tube †. When the ſtomach and bowels are ſubject to gouty ſpaſms, it will always be found neceſſary to give particular attention to the ſtate of the body.

In Eruptive Diſeaſes, in Hemorrhages, and in many other Complaints, the evacuants here treated of are much abuſed. But, not to exceed the limits preſcribed to this work, it is neceſſary that we confine ourſelves to a few more examples ſelected from thoſe diſorders in which the abuſe is moſt conſiderable.

In

* Greg. Elements, § 401, 402.

† Alvi ſuppreſſione diuturna ſtercus accumulatum, exſuccum, dureſcit, ægre dein promovendum: inteſtinis hinc diſtentis, ἐμφράξι imperviis, fibris eorum infirmatis, vaſis compreſſis, tumet venter, moleſtia naſcitur hypochondriaca, pertinax alvi conſtipatio, hæmorrhoides, capitis gravitas, dolor, vertigo, angina, ophthalmia, vomitus, ileus, putror fecis, æſtus, febris, ſpaſmus, inflammatio inteſtinorum, &c. Hæc quidem in naturis debilioribus, quæ plurimum excrementi generant. Gaubius's Inſtit. Pathol. §. 558.

In the Small-Pox, both emetics and purgatives have been ſometimes found uſeful. Unfortunately in this inſtance as well as in many others, general rules have been formed from ſingle caſes, to the great hinderance of the progreſs of medicine. For the principle too often is unhappily found at variance with the fact. The fever attendant on the ſmall-pox is not of one determinate kind, but very different in different perſons, and even in the ſame perſon at different ſtages of the diſeaſe. It frequently appears under the form of an inflammatory, catarrhal, nervous or putrid fever. It is a contradiction in terms to ſuppoſe any one mode of practice ſuitable to ſuch oppoſite ſpecies of the diſeaſe. Purging however has moſt unfortunately been too often admitted with equal freedom in them all. The practice has been ſo unhappily prevalent among us, that the prejudice in its favor is now no longer confined to the faculty alone, but is become national and ſpread univerſally among people of every rank.

Purgative remedies in this complaint have been ſo greatly abuſed, that it would upon the whole have been far better for mankind, had their uſe in it never been known. When the variolous fever is purely inflammatory, and

the conſtitution of the patient vigorous and full, moderate purging is followed with a moſt ſenſible relief of the ſymptoms *. When the fever is nervous or putrid, it is a neceſſary part of the cure to remove the putrid contents of the firſt paſſages.

But when the conſtitution is weak previous to the attack of the ſmall-pox; when the ſedative action of the contagion has greatly added to that weakneſs; when the fever is of the low nervous kind, attended with little reaction of the ſyſtem; and when there is a preſumption that the patient will ſcarce have ſtrength enough to weather through the ſtorm of ſo tedious and ſo obſtinate an illneſs; what can be more inconſiderate than by copious purging during the courſe of the diſeaſe, to act in conjunction with the morbid powers in deſtroying the conſtitution?

At the termination of the ſmall-pox, what opinion muſt we form of the indiſcriminate uſe of purgatives, which has ſo long prevailed? It may ſafely be aſſerted that after many caſes of

* Greg. Elem. of Practice.—Van Swieten Comm. in Aphor. 1399.

of the confluent ſmall-pox, where the patient has juſt eſcaped with his life, the practice of immediately purging is extremely erroneous. In ſuch a critical juncture, I have ſeen and admired the caution and ſagacity of Dr. Gregory, a late celebrated profeſſor of medicine, who wiſely neglecting the uſe of purgatives, followed with the greateſt ſucceſs a contrary method of treatment, exhibiting wine and the peruvian bark to ſupport the patient's ſtrength by their cordial, ſtimulant and tonic powers. But we do not mean to be underſtood as never admitting the uſe of purgatives after the ſmall-pox. We know that there are caſes, where inflammatory ſymptoms remain and indicate the peculiar propriety of their uſe. It is here meant only to object againſt all promiſcuous undiſtinguiſhing practice, which is generally erroneous, becauſe it is regulated by no ſyſtem, and directed by no rational experience.

It is worth obſerving, that in the treatment of patients under inoculation, a practice ſo ſalutary and univerſal, purgatives have been employed with more freedom than judgment. During the preparation, gentle laxatives in full habits are often adminiſtered with ſucceſs. But when

when ſtrong mercurial cathartics are preſcribed indiſcriminately to children of a delicate and relaxed fibre, they are undoubtedly hurtful *. A weak child is moſt ſucceſsfully prepared for inoculation, by ſtrengthening his conſtitution. After the diſeaſe too, we by the ſame means moſt effectually promote the patient's recovery, preſerve his health, and guard him againſt the acceſſion of other complaints or enable him to bear them better. The contrary effects may often be obtained by purging. The child, if he ſurvive, will be greatly reduced and recover ſlowly; but if he be accidentally attacked with another

* Dimſdale on Inoculation, p. 17, 19, 20. "In directing the preparatory regimen I principally aim at theſe points; to reduce the patient, if in high health, to a low and more ſecure ſtate; to ſtrengthen the conſtitution if too low; to correct what appears vitiated, and to clear the ſtomach and bowels, as much as may be, from all crudities and their effects." For all thoſe of a weak conſtitution, Dr. Dimſdale obſerves, "a milder courſe of medicine, rather of the alterative than purgative kind is here preferable. Indeed the particular ſtate of health of every perſon entering upon the preparatory courſe ſhould be enquired into and conſidered. Inattention to this has, I am ſatisfied, done great miſchief, and particularly the indiſcreet uſe of mercurials, whereby a ſalivation has often been raiſed, to the riſque of impairing good conſtitutions, and the ruin of ſuch as were previouſly weak and infirm."

another diſeaſe, he will run great hazard of prematurely quitting the ſtage of life.

Emetics, as well as purgatives, are fitted to aſſiſt nature to ſtruggle through the ſmall-pox; but from miſmanagement, they are frequently made to act a contrary part, and to aſſiſt the diſeaſe to prevail over nature. Either at the firſt attack of the eruptive fever, or juſt before the eruption, or when the puſtles do not riſe and proceed favorably, an emetic may be ordered to great advantage, determining the blood to the extreme veſſels, and facilitating the riſe, progreſs and maturation of the puſtules, on the proper ſtate of which, the life of the patient principally depends. This remedy too may, eſpecially about the decline of the ſalivation, be ſometimes moſt ſucceſsfully employed for removing, as in the malignant angina, a quantity of viſcid phlegm, accumulated in the throat and endangering ſuffocation. But in caſes of great depreſſion of the vital powers, which in this diſeaſe often proceeds to a fatal length, the too frequent excitement of full vomiting cannot be endured without proving manifeſtly injurious to the patient. The nauſeating doſes of emetic tartar, not cauſing ſuch muſcular exertion

and

and fatigue, may be frequently ſubſtituted in its place with ſucceſs.

The Hemoptoe or Spitting of Blood is a diſeaſe, in which the uſe of emetics, though ſometimes important, ſeems not generally underſtood. When the blood is diſcharged from the lungs in a conſiderable quantity, flowing freely in conſequence of the rupture of large veſſels, the danger of giving an emetic to excite vomiting, is too evident to require a formal prohibition of the practice. Yet groſs as this abuſe may ſeem, there are inſtances in which it has not only augmented the diſeaſe, but proved the immediate cauſe of death. It ought however to be obſerved, that the danger even in this very caſe is not ſo certain and imminent, as phyſicians have been inclined to think. For ſome courageous men, making too free with the lives of others, have not been afraid of puſhing this practice to the extreme. They have frequently ſucceeded in their raſh attempts. They have forgotten or rather ſuppreſſed their bad ſucceſs, and ſtrenuouſly communicated to the public the happy effects of their practice. By this means they have confounded the judgment of practitioners of an inferior order; ſome

of

of whom they have at laſt perſuaded to follow their unwarrantable method of cure.

But in caſes of this diſeaſe, accompanied with tubercles or an ulcer in the lungs, where the matter expectorated is only tinged with blood, without the rupture of any conſiderable veſſel, gentle emetics, when indicated, may be adminiſtered with perfect ſafety, and in many caſes with ſucceſs *. They determine the blood from the lungs, they promote a more equable circulation, they remove cutaneous ſpaſm, and thus leſſen the anxiety, cough, ſanguine evacuation, and difficulty of breathing. Hence may be derived in this diſeaſe the utility of ſailing, in conſequence of its inducing ſickneſs and vomiting. But in every caſe of hæmoptoe, where

* Greg. Elem. of Practice, § 337. Speaking of the conſumption, attended with ſpitting of blood, Dr. Gregory recommends the practice of taking off the determination to the lungs by ſailing and ſometimes gentle emetics.

Lect. on Mat. Med. p. 465. "Practitioners have ſpoke of giving emetics in ſpitting of blood. In the infirmary I have exhibited them without bad effect, and perhaps it was for want of courage to continue them that they did not work a cure. There are certainly caſes where they may be uſeful."

Dr. Cullen in his Lectures on the Practice recommends the uſe of emetics in this caſe.

vomiting is not allowable, ſmaller doſes of an emetic, particularly of an antimonial one, to determine to the ſurface, to promote expectoration, and gently to open the body, are ſerviceable.

In the Hemorrhoides, commonly termed the Piles, mild aperient laxatives are found univerſally uſeful. When this hemorrhage is active, proceeding from a ſanguine congeſtion of the hemorrhoidal veins and attended with general plethora, gentle purgatives ſhould not be omitted. But when the diſeaſe is recent, merely local, the effect of coſtiveneſs alone, and unconnected (even in conſequence of habit) with the general ſtate of the ſyſtem, purging is unneceſſary, therefore pernicious. An open body is requiſite, and will alone often complete a cure, which is perhaps aſcribed to ſome inſignificant quackiſh modes of practice, accidentally or deſignedly made uſe of at that time.—It happens not unfrequently, that the prolapſus ani or deſcent of the rectum, is complicated with the piles. In conſequence of this accident, great irritation is given to the hemorrhoidal tumours on going to ſtool, and the diſcharge of blood is encreaſed. This fact has ſcarce been ſufficiently attended to.

The

The frequency of ſtools in ſuch caſes ſhould be cautiouſly avoided, and the body only juſt kept gently open *. The aperients beſt adapted to the hemorrhoidal diſeaſe, are thoſe which give the leaſt irritation to the alimentary canal; ſuch as ſulphur, caſtor oil, manna, acid fruits, cream of tartar, neutral ſalts in ſmall doſes, &c. All ſtrong cathartics which irritate the rectum, are very pernicious. Particular attention is requiſite to the patient's diet. Whatever produces coſtiveneſs ſhould be ſteadily avoided. Vegetable aliment in ſome conſtitutions, obviates conſtipation † and greatly favors the cure of the diſeaſe.

The Dyſentery and Diarrhæa have very often been moſt inaccurately confounded together. But this error is now become leſs frequent and leſs excuſable, ſince the difference of practice in theſe diſeaſes is found ſo very material; and ſince the moſt judicious and correct obſervations of a very eminent phyſician have thrown ſo much light upon the nature, cauſes, and treatment of the dyſenteric flux. For an accurate diſtinction of the dyſentery, I ſhall

* Cullen's Clinical Lectures.

† Haller's Primæ Lineæ, § 642.

refer my reader to the writings of Sir John Pringle.——That diſeaſe commonly ariſes from contagion, and is accompanied with a combination of ſymptoms very different in general from thoſe attendant on the diarrhæa, which is for the moſt part ſymptomatic of ſome other complaint.

It has been obſerved that in theſe diſorders the practice is materially different. In the dyſentery, the larger inteſtines are generally obſtructed with indurated fæces, which are often obſtinately retained by the ſpaſmodic contractions of the colon. The practitioner evidently trifles, if he do not inſtantly attack the diſeaſe with the proper uſe of mild and repeated purgatives *. The neutral ſalts are found ſafe and ſucceſsful †. They evacuate the in-

* Monro Dif. of Mil. Hoſp. p. 74. "I have ſometimes given theſe purges to ſtrong people every day for two, three, or four days ſucceſſively, and obſerved that the patient inſtead of being weakened ſeemed ſtronger, &c."

Sydenham Oper. Sect. iv. chap. iii. p. 183. Proinde ultro ſe, &c.

† "Next day we ordered a purge to empty the other parts of the alimentary canal. The purgative that at firſt was moſt employed for this purpoſe was rhubarb; but upon

indurated fæces, reſiſt the ſpaſms, eaſe the pain, and abate or remove the violent irritation upon the rectum. The neglect of purgatives has been followed in numberleſs inſtances with inflammation and gangrene, particularly of the larger inteſtines. Draſtic heating cathartics have often been employed in the dyſentery, but are in general evidently hurtful, and much inferior to thoſe of milder operation.

In the diarrhæa which is for the moſt part ſymptomatic, the practice muſt be varied according to the nature of the primary diſeaſe, which will frequently be found to contraindicate the free exhibition of purgative remedies. It would be an endleſs taſk and foreign to our purpoſe, to treat here of the variety of practice uſeful in the

on repeated trials we did not find that in general it anſwered ſo well in this firſt ſtage of the diſorder, as the ſal catharticum amarum, with manna and oil; which operated without griping or diſturbing the patient, procured a freer evacuation, and gave greater relief than any other purgative medicine we tried." Monro on the Diſeaſes of Military Hoſpitals, p. 70.

Sir John Pringle uſed as a purgative ipecacuanha, or calomel with rhubarb. — Mr. Cleghorn recommends ipecacuanha and the vitrum antimonii ceratum.

Diſ. of Minorca, p. 249.

the cure of a ſymptom, prevailing accidentally in a great number of diſorders. We muſt, nevertheleſs, complain, and with very great authorities on our ſide, of the frequent ill-judged employment of purgatives in the diarrhæa, which are continued to be given, like many other medicines, becauſe they are in vogue, not becauſe experience has repeatedly evinced their utility. They can only have place in this diſorder, when the dyſenteric obſtruction or ſome ſpecies of acrimony prevails. They are not however indicated in every kind of acrimony; and in many other inſtances, they often prove injurious to the conſtitution. — If acidity in the firſt paſſages occaſion the diſeaſe, abſorbents, not purgatives, are generally the proper remedy.— If putreſcency produce it, acids and aceſcents are powerful means of cure, though abſorbents are often improperly preferred, which indiſputably tend to promote the putrefactive fermentation †.—If, as frequently occurs in hyſterical complaints, the inteſtines from particular cauſes, as for inſtance, from grief, ſurprize, or the ſudden application of cold and moiſture to the feet, be thrown into unnatural motions,

opiates

† See Pringle's Experiments on ſeptics and antiſeptics. Exper. 40.

opiates will allay thoſe motions, while purgatives, not excepting even rhubarb, will have an evident tendency to encreaſe the malady.—If a general relaxation of the inteſtinal tube be the cauſe, as in colliquative fluxes, gentle aſtringents may be employed.—If from cold the obſtructed perſpirable matter be determined to the bowels, nature alone, or aſſiſted perhaps with a mild emetic *, will effect a ſpeedy cure.—If a diarrhæa be the conſequence of an inflammatory affection of the bowels, blood-letting ſuperſedes the uſe of purgatives.—If the bile, at a particular ſeaſon of the year, happen, as in the cholera, to be too copious as well as too acrimonious, that fluid may, by the uſe of oily mu-

* Vid. Sydenham. Oper. cap. iv. p. 55. Jam vero nequid dubites humorem hunc in ventriculo nidulantem, niſi forte vomitu eliminetur, hanc tragœdiam (diarrhæam dico) quaſi ex inſidiis aliquanto poſt daturum; inquiſitione inſtituta nunquam fere non comperies, ſi quando febrim diarrhæa comitetur, ægrum in morbi principio in vomitum proclivem fuiſſe, nec tamen emeticum fuiſſe propinatum. Porro etiam compertum habebis, etiamſi proclivitas illa ad vomendum jam pridem præterierit, diarrhæam tamen, quam primum vomitorium exhibueris, plerumque ceſſaturam; dummodo emetico ferendo pares fuerint ægri vires: Sæpius tamen obſervavi, diarrhæa ſemel aborta, medicamenta adſtringentia vel nihil omnino, vel parum admodum ad eamdem ſiſtendam conferre, ſive introſumpta, ſive exterius applicata.

mucilaginous remedies, be diluted, rendered leſs ſtimulating, and evacuated without the additional irritation of a purge.—In a great variety of caſes, the diſorder is really critical, tending to remove another of a much more alarming nature, where the very attempt to check it may juſtly be accounted raſh.

In Weakneſſes of the Stomach and Bowels, and in Hypochondriacal Complaints, which are the preſent reigning endemics of the world, emetics and purgatives have often been very injudiciouſly employed. Few practitioners of experience, however, will queſtion their utility when properly ordered. The mode of their beneficial operation may eaſily be deduced from the remarks already made on their general effects. We hardly need obſerve, that they may be ſo given as really to relieve every ſymptom of thoſe diſorders, whether indigeſtion, ſpaſms, colic pains, ſickneſs, flatulence, acidity, heart-burn, coſtiveneſs, head-ach, want of appetite, or even dejection of ſpirits, a ſymptom ſo very generally accompanying all morbid indiſpoſitions of the alimentary canal. We may here with propriety take notice of the great ſympathy which ſubſiſts between the ſtate of the ſtomach and

that

that of the extreme cutaneous veſſel. Were it neceſſary, one might eaſily adduce many facts from the hiſtories of diſeaſes to prove the reciprocal conſent of thoſe parts, by ſhewing how frequently a morbid ſtate of the one has affected the other *. The efficacy of emetics in vigorouſly exciting the circulation in the extreme veſſels, and in ſupporting their tone, is often found highly conducive to the cure of thoſe lingering ſpecies of complaints.—Coſtiveneſs alſo is particularly prejudicial, and therefore is very ſucceſsfully obviated by gentle laxatives. Yet notwithſtanding ſo fair a proſpect of relief, theſe very means have frequently been ſo unſkilfully

* "The ſtomach is connected with the whole ſurface of the body, and ſeemingly with the extreme veſſels every where. This is demonſtrable by many obſervations; e. g. no ſooner do ſome aliments reach the ſtomach of particular perſons, than ſpots and efflorescences are occaſioned on the ſkin. Van Swieten gives ſuch an inſtance from crabs eyes. I myſelf had a patient laboring under the malum hypochondrium, who was relieved of his complaints by pimples appearing between his thumb and finger, and as immediately oppreſſed by their retropulſion or diſappearing. Vomiting from conſtriction of the cutaneous pores is another inſtance of ſuch ſympathy. Such ſymptoms therefore are falſely attributed to acrimony, and in general we conclude that the ſtomach has a very general conſent with the whole ſyſtem."

Lect. on Mat. Med. p. 9.

employed, as not only to fail of producing the deſired effect, but greatly to encreaſe all ſuch ſtomach-complaints and hypochondriac diſorders, by weakening the general ſyſtem and deſtroying the tone of the alimentary canal.

The Colic is a diſeaſe attended with ſevere pain in the bowels and obſtinate conſtipation. Calculous concretions, extraneous bodies, and various topical affections of the bowels, as ſpaſm, ſtricture, rupture, compreſſion from tumors, &c. are frequently the cauſe of colic. Ruptures, which in general are externally diſcoverable and often admit of relief from the art of ſurgery, ſhould in all caſes of violent coſtiveneſs be ſuſpected by the phyſician; otherwiſe he will be liable, not only to practiſe at random, but to aggravate the diſeaſe, to excite inflammation, and careleſsly to loſe his patient without giving him a chance of recovery. I have ſeen this unfortunate accident happen more than once in caſes of femoral hernia, where the tumor being very ſmall, lay concealed not only from the patient, but from the practitioner himſelf, whoſe profeſſion renders it his indiſpenſable duty to be ever attentively on his guard to avoid errors which may prove dangerous to his patient. —— But independent of thoſe cauſes

cauſes of colic, copious indurated fæces occaſioning obſtinate conſtipation, are often ſufficient of themſelves to produce the diſeaſe. Tho' in moſt other caſes, to obviate coſtiveneſs, from whatever ſource the diſeaſe may have ariſen, be an important indication; yet in this laſt caſe, the uſe of gliſters or purgatives by the mouth, is the moſt efficacious means of cure. To trifle and palliate with opiates alone, in the beginning of ſuch a complaint, is unſafe. Injections ought firſt to be uſed *. If theſe repeatedly fail, recourſe muſt immediately be had to the milder laxatives, the neutral ſalts, manna, rhubarb, ſena, caſtor oil, tamarinds, cream or cryſtals of tartar, &c. Afterwards we give, when neceſſary, purgatives of a more active nature, ſuch as jalap, calomel, emetic tartar, aloes, the cathartic extract or the cerated glaſs of antimony, &c. In a ſevere fit of the colic, every moment is valuable, and impending danger

* Turpentine gliſters, and thoſe made with emetic tartar and ſtrong purgatives, are frequently requiſite, and may be advantageouſly employed. Tobacco ſmoak has ſometimes been injected with ſucceſs.—Sometimes very conſiderable quantities of warm water, viz. two or three quarts or more, have proved efficacious by way of injection, when the moſt powerful purgatives have failed. Several caſes of this kind are recorded in the Clynical Reports of the Royal Infirmary at Edinburgh.

diſdains a timid practice †. From neglect in not making timely application for relief, this diſorder often terminates fatally; although, at its firſt riſe, an ounce of glauber's ſalt might have compleatly removed it. After the pain and ſpaſm have for ſome time continued fixt, the irritation of ſuch ſenſible parts excites nauſea and vomiting, in conſequence of which the beſt choſen remedies are apt to be thrown up, and their operation on the bowels prevented. Hence ariſe inflammation and gangrene. What ſcenes of diſtreſs are frequently obſerved to occur in the colic, from careleſsly or ignorantly omitting the application of proper remedies, or from employing them in an improper manner. The ſlightneſs of the diſeaſe in numberleſs caſes, affords not the ſmalleſt excuſe for negligent practice. If a phyſician ſhould be remiſs in his attendance in caſes where medicine cannot relieve, his inattention is pardonable; but where the conſequences may prove fatal, his humanity will be deſervedly ſuſpected.

With regard to the Diſorder of Worms, it is a dubious queſtion to determine, whether thoſe animals

† Hipp. Aph. 6. Sect i. Ἐς δὲ τὰ ἴσχαλα νοσήματα, αἱ ἰσχάλαι θεραπεῖαι ἐς ἀκριβείην κράτιστα.

animals or the general practice by purgatives to deſtroy and expell them, have been more detrimental to the human ſpecies. This diſorder is not ſo very frequent as ſome have ſuppoſed; it is often ſymptomatic, the conſequence of a morbid relaxation of the habit which purgatives encreaſe; and often it is unhappily confounded with other diſorders, eſpecially with ſcrophulous obſtructions of the meſenteric glands. It is the opinion of a great phyſician, that on account of worms which are frequently very harmleſs inſects in themſelves, many children have been abſolutely deſtroyed by the imprudent uſe of purgatives. Though it be well known that purgative remedies, when judiciouſly employed, are uſeful in this diſeaſe; yet I readily adopt his opinion.

In Dropſies, whether the extravaſated fluid be diffuſed through the cellular membrane, producing anaſarcous ſwellings, or accumulated in a preternatural quantity in ſome cavity of the body; emetics and purgatives have often been uſed to promote its abſorption and evacuation *. In ſome few caſes their effects indeed

* See Dr. Monro on the Dropſy, p. 52. "Emetics encreaſe the oſcillation of the ſolids, as well as the motion of the

indeed were obſerved to be very conſiderable. Large quantities of fluids were diſcharged, and the hydropic tumours unexpectedly reduced. This accidental ſucceſs, magnified by a heated imagination, unhappily paved the way for the long continuance of a very pernicious practice.—The cauſes of dropſical ſwellings are numerous, and many of them incapable of being relieved by ſuch rude kind of treatment †. Will thoſe evacuants, for inſtance, reduce the ſchirroſity of a liver to its natural tender contexture?

the fluids contained in them. By which means the forcible compreſſion of the bowels one againſt another, the excretion of watery and ſlimy liquors from the mouth, throat, and ſtomach, are augmented." Dr. Monro afterwards adds ſome neceſſary precautions relative to their uſe, and particularly forbids them when the patients are threatened with lethargy and apoplexy. Ibid. p. 56. "Purgatives generally quicken the pulſe before they operate; they encreaſe the ſecretion of thin liquors into the inteſtines, and diſcharge their contents, while at the ſame time by diſſolving the craſis of the blood, they render the whole maſs more watery and weaken the patient."

† "Many and various are the cauſes of dropſies, the principal of which are the following: A weakneſs and laxity of the fibres; diminiſhed retention of watery liquors; whatever obſtructs the circulation of the blood in the larger veſſels, as polypi in the heart or large veſſels, ſchirri, impoſthumes, tumors, and other cauſes of obſtruction or compreſſion; ruptures of lymphatics, &c." Monro on the Dropſy, p. 9.

texture? Will they, however they may tend to prevent, remove any other fixt viſceral obſtructions, whether in the ſpleen, the heart or the lungs? Will they ſoften preternatural oſſifications of the valves of the heart or of the blood-veſſels, which obſtruct the circulation and occaſion ſerous effuſions? Will they remove a tumor, which by compreſſing the jugular vein may impede the return of the blood from the head, and produce dropſy of the brain or a ſpecies of ſerous apoplexy? When univerſal relaxation, followed with encreaſed exhalation and diminiſhed abſorption, gives riſe to the diſeaſe, which in ſuch a caſe is to be looked upon as the laſt fatal mark of a broken conſtitution; will vomitting or purging brace and invigorate the relaxed fibres? Yet in all thoſe caſes as well as in others of a ſimilar nature, emetics and purgatives have been exhibited. Many practitioners, not content with remedies of the milder ſort, have not heſitated to preſcribe the moſt draſtic, ſuch as the regulus of antimony, turbith mineral, ſcammony, gamboge, calomel, colocynth, &c. ‡. With what ſucceſs

‡ Dr. Monro obſerves, "that if the hydropic water is not evacuated, nor the ſymptoms alleviated by the frequent uſe of ſtrong purgatives, the miſchief muſt of courſe be encreaſed; for

ſucceſs very little experience might long ſince have informed them. If the lives of thoſe unhappy patients cannot be preſerved, let us at leaſt not add to their misfortunes. Though we ſhould by ſuch ſevere treatment accidentally leſſen the morbid exhalation, encreaſe the action of the inhaling veſſels, and ſomewhat diminiſh the hydropic ſwellings; yet the practice is merely palliative, the cauſe ſtill remains unaltered, and the ſymptoms of the diſeaſe will moſt probably return with redoubled vehemence.——Some eminent phyſicians, whoſe ſoundneſs of judgment has, from the beginning of their practice, prevented them almoſt from making trial of ſuch ſevere remedies; yet have in particular caſes prudently uſed milder means of a ſimilar kind. Cream of tartar, cautiouſly employed, has been given with evident ſucceſs, where the ſtate of the conſtitution

for when the ſtrength is waſted, violent purging is hurtful, ſince the more moiſture is carried off from the body, the greater quantity of it will in a ſhort time be again admitted into the cavities, as Dr. Mead very juſtly obſerved, and we find to be true by daily experience." On the Dropſy, p. 58. Dr. Fordyce condemns the uſe of all ſuch purgatives and emetics in dropſies, becauſe he has ſo frequently ſeen them extremely pernicious. Lect. on the Practice. Dr. Hunter is perfectly of the ſame opinion. For ſuch remedies not only haſten death but render life miſerable. Lect. on Anatomy.

ſtitution and the ſymptoms of the dropſy indicated that method of cure *.

I ſhall draw the laſt example of the abuſe of theſe remedies from the Jaundice. A calculous concretion in the hepatic or common duct, is far the moſt frequent cauſe of that diſeaſe †. The bile prevented from flowing in its uſual channel, is conveyed through the abſorbent veins into the blood ‡; and being circulated through the ſyſtem, tinges the external ſurface with a yellow color, which is no where ſo conſpicuous as on the white of the eye. Other cauſes alſo may produce a ſimilar effect, ſuch as vicidity of the bile; a ſpaſmodic contraction or inflammation of the duct; coaleſcence of its

 ſides;

* Eſſay on the Dropſy, p. 61, note (c), after mentioning many caſes of dropſy in which this remedy was ſucceſsfully employed, Dr. Monro obſerves, "I have uſed the cream of tartar in the manner here recommended, and have found it to be a good remedy in ſuch caſes, and although it will not anſwer in every caſe, yet it will often produce good effects. Some of the caſes in which I ordered it are related in the ſubſequent part of this eſſay."

† Monro Mil. Hoſp. p. 206.

‡ Lymphatic Veſſels from the liver are very numerous and by the diſſection of people who have died of the jaundice, they have been found diſtended with gall. Monro's Lectures on Anatomy.

ſides; tumors of the adjacent parts by compreſſion rendering it impervious, &c *. Hence we may explain the following common facts, that the jaundice, eſpecially in children and hyſterical perſons, is often a very trivial diſeaſe; that it is frequently of a moſt obſtinate incurable nature; and that no one medicine can poſſibly be ſuited to counteract ſuch various cauſes. There is no remedy yet diſcovered, which can be conſidered with any propriety as a ſolvent of the biliary concretions. It is well known that an eſſential oil combined with ſpirits, diſſolves gall-ſtones out of the body †. That compoſition has been given internally, in order to diſcover whether it poſſeſſed a ſimilar power of diſſolving them when lodged in the biliary paſſages. It had been happy for mankind

* Monro Mil. Hoſp. p. 206, 207.

† "Two firm biliary calculi had been expoſed to heat in ſpirit of wine for twenty-four hours; yet retained their ſize and form. Some oil of turpentine was added to the ſpirit in each of theſe veſſels; a few hours after on ſhaking and examining the mixtures, I found that the ſtones were fallen to pieces, and the liquor become brown and turbid. It ſeemed from this experiment, that Valiſnerius had reaſon for aſcribing to heated ſpirits of wine and turpentine a ſuperiority (Opere t. iii. p. 6, Lett. 37) over the other diſſolvents of theſe concretions." Maclurg's Experiments on the Human Bile, p. 192.

mankind had the ſucceſs of ſuch experiments proved more ſatisfactory *. — Emetics and purgatives in this diſorder are a principal part of the practice, though they ſhould not be employed too freely. As the inteſtines are deprived of the natural quantity of bile, the gentle aid of an aperient remedy is indicated to ſupply that deficiency, and to excite the periſtaltic motion. The action of vomiting likewiſe has,

* Mr. White, a very ingenious accurate apothecary in the city of York, has made trial of that remedy. "But if we conſider the peculiar œconomy obſerved by nature in the circulation of the blood through the liver, the long ſtagnation of the bile in the gall-bladder, and the quickneſs with which alcohol and oil of turpentine paſs off by urine and perſpiration, it is to be feared that ſuch a menſtruum, powerful as it may be, will ſcarcely reach the ſolvend. To this objection we may alſo add, that the diagnoſtics of the diſeaſe are often obſcure and uncertain." Percival's Eſſays, vol. II. p. 232.—Beſides we ſhould conſider, that the remedy muſt firſt be ſubjected to the powers of the digeſtive organs; then abſorbed by the lacteal veins; diluted with the lymphatic fluid, and afterwards paſſing through the thoraſtic duct, be mixt with the maſs of blood, and equally diſtributed over the whole ſyſtem. Yet in this highly diluted ſtate, it does not arrive at the ſtone, which is placed out of the courſe of circulation.—If the biliary duct ſhould happen to be inflamed, it is to be ſuſpected that a remedy compoſed of the oil of turpentine and ſpirits of wine would be too ſtimulating to be employed with ſafety.

beſides its ordinary effects †, a remote chance of forcing the gall-ſtone out of the duct into the inteſtinal tube *. Such fortunate events have actually happened on the exhibition of an emetic. But when the biliary concretion obſtructs the paſſage of the bile, it ſometimes excites, in conſequence of irritation, a ſpaſmodic ſtricture and inflammation of the duct. In ſuch caſes, emetics are evidently unſafe.—Sometimes when the ſtone has long obſtructed the biliary duct, and a variety of remedies have been tried to no purpoſe, nature alone will at laſt expell it; after which fortunate change, the ſymptoms of the diſeaſe, although previouſly violent, will gradually diſappear. This incident, together with the frequent occurrence of ſlight caſes

† "Vomits are reckoned amongſt the moſt efficacious remedies in this diſorder, and I have often ſeen good effects follow their uſe." Monro Mil. Hoſp. p. 211, note (e).

* Lect. on Mat. Med. p. 461. "While vomiting continues, it not only inverts the periſtaltic motion of the ſtomach itſelf, but alſo of the inteſtines, which pour out their mucus to be carried to the ſtomach, and evacuated with its contents. This ſerves to explain the throwing up of bile, but is by no means the common cauſe of it, for it is manifeſtly produced by ſqueezing of the liver and gall-bladder, a proof of which is that it occurs at the end of the operation. — As ſqueezing the liver and gall-bladder, vomiting may puſh biliary ſtones into the inteſtines, and cure the jaundice."

caſes of jaundice, and the difficulty often of aſcertaining with certainty the exiſtence of gall-ſtones, has produced, as might have been expected, much quackery, great profuſion of noſtrums, amulets, and charms.

SECTION III.

OF

SUDORIFICS.

A GREAT variety of remedies have been employed as SUDORIFICS *. Numbers of the moſt inert animal, vegetable, and mineral ſubſtances, poſſeſſed in reality of no virtue at all, have been adminiſtered under this character, and not without a pretended ſucceſs. External heat and warm diluents are generally ſufficient of themſelves to produce ſweating. Their very powerful effects have been erroneouſly attributed to ſaffron, contrayerva, millepedes, diaphoretic antimony,

* The term Sudorific in this ſection is frequently uſed as ſynonimous with the term Diaphoretic. "By diaphoretic remedies are meant thoſe ſubſtances which being taken internally, promote a diſcharge by the ſkin without producing this effect either in conſequence of violent agitation or acute pain." Elem. of Therap. p. 128.

Vid. Home's Methodus Mat. Med. p. 17, 18.

antimony,—to ſmall doſes of caſtor, ſnake-root, camphor, neutral ſalts *,—and to a thouſand other ſuch ineffectual means. The practice of ſweating has been employed in a multitude of diſorders of the moſt oppoſite kind. The cure of inflammatory, catarrhal, nervous, putrid and peſtilential fevers,—of eruptive, rheumatic, cutaneous, nervous and hydropic diſeaſes, &c. has been indiſcriminately attempted by ſudorifics. An abuſe, ſo notorious and univerſal, has been productive of ſuch ſcenes of calamity, that the record of them will ever ſtand as a diſgrace to the art of medicine.

While practitioners ſupported by the obſtinacy of vulgar prejudice, wandered in a labyrinth of confuſion, kind inſtinct made endleſs, but unſucceſsful efforts to correct their miſtaken doctrine †. It is really ſurprizing, that phy-

* Speaking of the violent fever, Dr. Fordyce obſerves, that "ſmall doſes of the neutral ſalts have been exhibited at this time of the diſeaſe, but for the moſt part without any ſenſible advantage." Elem. of Practice, p. 163.

† Greg. Elem. of Practice, § 25. "If fevers were to be treated on nature's plan, as indicated by natural inſtinct, patients would breathe a cool pure air, would be indulged in cold drink, in ſitting up or lying in bed as was moſt agreeable

phyſicians till of late ſhould have ſo anxiouſly continued for centuries in an erroneous practice, which might have been detected, and which ought to have been exploded, as ſoon as it had been fairly put to the trial. Almoſt every caſe in which it was adopted, might have afforded a convincing proof againſt it. Almoſt every caſe in which the patient refuſed to comply with ſuch treatment, or where in conſequence of his poverty he was happily neglected, might, one would imagine, have given a ſatisfactory demonſtration of its abſurdity. The ſenſe of coldneſs, which generally precedes febrile affections, led men to ſuſpect cold to be an univerſal cauſe of that claſs of diſorders. Sudorifics and the ſweating regimen ſeemed to be indicated and to afford the moſt natural method of cure. This theory, carried to a ridiculous length, paved the way, in ſpite of facts, of inſtinct and experience, to a very abuſive practice. It was a practice

 which

able to them; they would not have their limbs pinioned within the bed-cloaths, would not be teaſed to eat or to drink more than thirſt prompted them, and when low and faintiſh, would be indulged in ſuch cordials as were moſt grateful to them. Till of late the common practice in fevers was almoſt diametrically oppoſite to this in every particular; and yet phyſicians believed they were following nature."

which during the long period in which it prevailed, rendered the medical art more deſtructive of health and life, than almoſt any one cauſe of diſeaſe to which human nature is obnoxious.

The employment of ſudorifics, when really indicated, conſtitutes a very important part of the practice of phyſic. Thoſe remedies generally accelerate the motion of the blood and promote a free equable circulation. They determine the blood to the ſurface of the body, they leſſen or remove internal congeſtions, encreaſe lymphatic abſorption, obviate ſpaſm of the extreme veſſels, favor the cuticular diſcharge, and diminiſh the quantity of the circulating fluids *.

Sudorifics then, ſince their operation on the animal œconomy is ſo conſiderable, ought not to be trifled with or unneceſſarily employed. Their unneceſſary adminiſtration, however, has led to an abuſe as notorious as frequent. The practice of ſweating ſeems to have been conſidered as being little capable of injuring the general

* Elements of Therapeutics, p. 128.——Boerhaave Inſtit. p. 435.

neral health of the conſtitution, and therefore ſafely admiſſible on the moſt trivial occaſions. Inaccuracy of obſervation has permitted the fallacy of the opinion to remain too much neglected.

Unneceſſary Sweating, on the contrary, has always a pernicious effect on the conſtitution. Promoted by external heat, warm confined air, and hot ſtimulating medicines, (which have been the means moſt commonly employed) it becomes ſtill more certainly injurious. Beſides being generally accompanied with uneaſineſs, it often converts a trivial complaint into a ſerious one. It renders the patient more liable to take cold, as well as to ſuffer from its influence. The conſtitution by this means is apt to acquire an unnatural delicacy, which is very unfavorable to health and happineſs. The heat and moiſture with which the body is ſurrounded, tend to weaken and relax it. The ſkin and exhalant veſſels, through which the thinner parts of the blood are thus unnaturally forced, are particularly ſubject to feel the effect of its enervating power. How great the connection is between the ſtate of the extreme cutaneous veſſels and that of the ſtomach, has been already obſerved. Thoſe veſſels have a

ſimilar connection with the brain and nervous ſyſtem *. If by repeated ſweating, they loſe their tone, the whole conſtitution will be moſt materially injured. The evacuation itſelf, induced by the remedies and the regimen, is often conſiderable, and in ſome conſtitutions it is profuſe. The ſkin, which is the ſecretory organ from whence it is made, is very extenſive and richly provided with innumerable veſſels. In proportion to the greater degree of irritability of the ſyſtem, of encreaſed action of the heart and arteries, and relaxation of the ſurface, the evacuation is more copious. Weak perſons can ſeldom undergo the operation without much fatigue, and a very ſenſible depreſſion both of ſtrength and ſpirits. If great irritability prevail along with the weakneſs, the injurious

* Lect. on Mat. Med. p. 8. "At preſent I ſhall mention only one conſent, viz. that of the ſtomach, as it is to be more particularly regarded in accounting for the operations of medicines. Nothing affects the mind more than the ſtate of the ſtomach, and nothing draws the ſtomach into ſympathy more than affections of the mind. This is evident in hypochondriac people, whoſe diſeaſe being chiefly ſeated there, have often grievous effects on the ſenſorium commune, or the ſeat of it, the head. This is farther illuſtrated by wounds of the head. Does not, in theſe caſes, the vomiting of bile proceed from conſent between the ſtomach and liver?"

ous conſequences will be ſtill more ſeverely felt. If the ſyſtem be not already too irritable, the practice of ſweating tends greatly to induce a morbid ſtate of irritability, which prediſpoſes to many diſorders, and will unavoidably be found a conſiderable ſource of uneaſineſs *. As the mind too is ſo intimately connected with the body, the encreaſed irritability of the one adds generally to that of the other †. Neceſſity which gives riſe to the practice of ſweating, can alone juſtify its uſe in the treatment of diſorders.

But theſe facts will appear ſtill more evident and deciſive, as we proceed in the conſideration of the Neglect or Miſmanagement of Sudorifics in

* Gaub. Pathol. Inſtit. § 191 and 195. "Ut adeo huic vitio obnoxiis intolerabilia ſint, quæ ſani facile ferunt.—— Generales, qui ex irritabilitate oriuntur, effectus reducere licet ad ſolidorum vibrationes tremulas, criſpationes, tenſiones, ſpaſmos, convulſiones; ex quibus iterum dolores, anxietates, cavitatum contractiones, obſtructiones, inflammationes, & multiplex circulationis, ſecretionis, excretionis, aliarumque functionum impedimentum, ac alienatio conſequi poſſunt.—Unde dubites, utrum huic par affectio detur alia, quæ tot tantiſque hominem malis obnoxium reddat."

† A mente corpus irritabilius reddi non magis probabile eſt, quam illam ab hoc incitari. Ibid. § 194.

in caſes where their uſe was required; and of the Imprudent Adminiſtration of them in caſes where they ought to have been ſcrupulouſly avoided.—We ſhall confine ourſelves to the abuſe of ſudorifics in febrile diſorders only.

In the Intermittent and Remittent Fever, the paroxiſm is generally terminated by a ſpontaneous ſweat. This criſis indicated the practice of imitating the ſalutary operation of nature, and of promoting the cuticular diſcharge, in order to mitigate the violence and to ſhorten the duration of the fever. The dryneſs and paleneſs of the ſkin at the invaſion of the fit, denoting a ſpaſmodic contraction of the extreme veſſels and a defective circulation of the blood, ſeemed to point out the neceſſity of reſtoring by ſudorific remedies the determination to the ſurface. The principle is rational and well founded on facts. The utility of ſudorifics in intermittents and remittents will not admit of a doubt. Experience confirms the truth of that aſſertion. Sweating, judiciouſly conducted, has not only mitigated the ſymptoms, but prevented the return of the fits and radically removed the diſeaſe *. It is the abuſe only

* Boerh. Aphor. 761. Frigus et febris ſudorifero hîc tollitur

only which is juſtly to be complained of. Sweating has been univerſally promoted by external heat and ſtimulating remedies, which by exciting the action of the heart and arteries and not proportionately relaxing the external ſurface, have aggravated all the ſymptoms of the fever. Hence an encreaſe of heat, of thirſt, anxiety, head-ach, frequency of pulſe, &c. Such practice has protracted the duration of the paroxiſm. It has converted a tertian into a double tertian, a double tertian into a quotidian, a quotidian into a remittent, and a remittent into a continued fever which has often proved fatal in its conſequences. Or if the intermittent in ſpite of ſuch pernicious treatment, continue obſtinately to preſerve its form, the conſtitution of courſe becomes weak and irritable, the diſeaſe more fixt and ſevere, its effects more durable and unhappy. What other changes could rationally be expected from the ſtimulus of pepper, ginger, and other heating vegetables,—or of vinous ſpirits, acrid volatile ſalts

tollitur ſæpe, dum aliquot ante tempus cognitum futuri paroxyſmi horis liquido aperiente, diluente, leviter narcotico, repletur corpus ægri, dein una hora ante malum excitatur ſudor, et continuatur, donec binæ ultra tempus initii paroxyſmi elapſæ ſint horæ.

ſalts and external heat,—all which have been improperly uſed for ages paſt *.

In the Inflammatory, Nervous, and Putrid Fevers, a ſpaſmodic conſtriction of the cutaneous veſſels is found alſo to occur in fact, and as was before obſerved, to give an irritation which tends to continue and ſupport thoſe diſeaſes. A ſpontaneous relaxation of the ſurface with a warm gentle univerſal moiſture, has often been concomitant on the critical ſolution of a continued fever. To promote this natural criſis in ſuch diſorders, is as obvious an indication, as in the intermittent. The practice has been equally common. Recourſe likewiſe has been as univerſally had to heat, cordials and ſtimulants. The great Sydenham was among the firſt of thoſe illuſtrious men, who preferring public good to private intereſt, riſked his fortune and his character in boldly oppoſing that rapid torrent of evils and the ſtill more irreſiſtible prejudices of the world. Fortunately not

* Prodeſtque, in vetere quartana, ante acceſſionem ſorbere, vel aceti cyathos duos, vel unum ſinapis, cum tribus græci vini falſi, vel miſta paribus portionibus; & in aqua diluta, piper, caſtoreum, laſer, myrrham. Per hæc enim ſimiliaque corpus agitandum eſt, ut moveatur ex eo ſtatu, quo detinetur. Celſus de Medicina. lib. III. cap. xvi.

not only for himſelf and for his country, but for mankind in general, his honeſt labors were crowned with ſucceſs. He was bold, judicious and obſerving; eager in the purſuit of facts, and faithful in his repreſentations of them. His great judgment and acuteneſs enabled him to make accurate obſervations, to draw minute diſtinctions, to aſcertain their importance, to correct and confirm them.

Sweating, excited in the improper manner already deſcribed, was a practice, which though long eſteemed by phyſicians eſſential in the treatment of continued fevers, was yet no leſs erroneous in theory than in fact, and rendered the condition of febrile patients truly deplorable.

In the inflammatory fever, ſtimulating ſudorifics and the hot regimen added fuel to the fire, and cauſed it to burn with redoubled violence *. The heat of the body, which was before unnaturally great, then became abſolutely inſupportable; thirſt, anxiety and oppreſſion

* "But the moſt pernicious method of raiſing ſweats in the beginning of fevers is by giving hot volatile alexipharmic medicines, ſtoving up the patients in hot air, and ſmothering them almoſt with loads of bed-cloaths." Huxham on Fevers, p. 10.

were encreaſed; topical pains were univerſally aggravated; and the blood was conſiderably rarefied by the heat, occaſioning a temporary plethora, which is frequently productive of the moſt fatal conſequences. Thus a profuſe ſweat was at laſt obtained, but attended with ſuch an evident encreaſe of the ſymptoms, as was dangerous and alarming. A furious delirium often accompanied the raſh attempts of the practitioner, which he, ignorant of its cauſe, confidently attributed to the effects of the diſeaſe itſelf, and believed it might have been worſe, had the unhappy patient, unaſſiſted by art, been committed ſolely to the blind efforts of nature.

Not only delirium is produced or augmented by ſuch rude method of ſweating, but a moſt dangerous determination to the head is often cauſed, indicated by a vivid redneſs of the face, a ſuffuſion of the eyes, pulſation of the carotid and temporal arteries, violent pain in the head, and the other common ſymptoms of a phrenſy *, which is often the fatal conſequence of an ill-treated fever.—Or in this hazardous ſtate of the diſeaſe, a topical determination of blood to ſome other part may occur, and put an untimely period

* River. Prax. Medic. lib. I. cap. xi. p. 27.

period to life.—If the breaſt be affected, cough, topical pain, anxiety, difficulty of breathing and of lying, a livid bloated ſuffuſion of the countenance, &c. are ſymptoms which indicate the danger of the complaint and the abſurdity of the practice.—If too large a quantity of blood be forced upon the abdominal viſcera, the determination will be diſcoverable by a fulneſs in the regions of the liver and ſpleen; by a fixt pain, and an unnatural tenſion of the abdomen; by uneaſineſs in a recumbent poſture, with a ſenſe of anxiety without pulmonic affection; by nauſea and vomiting unuſually obſtinate, and not yielding to the ordinary methods of treatment. Hence ariſe inflammation, ſuppuration, or gangrene of the ſtomach, of the inteſtines, the liver, the ſpleen, the peritoneum, &c. or morbid effuſions of blood into the cellular membrane of the laxer viſcera, which often prove mortal *.

In the nervous fever, the conſequences enumerated under the inflammatory fever are frequently

* Every able phyſician is now fully convinced of the truth of theſe facts. Dr. Cullen, in his Practical Lectures, deſcribes very fully and accurately the pernicious effects of that mode of ſweating, by inducing the moſt fatal inflammations of the viſcera.

produced, except thoſe which depend merely on the greater vigor of the conſtitution. All the ſymptoms of the fever are encreaſed. Sanguine determinations and topical inflammations, particularly of the brain, are induced †; and though they are of leſs frequent occurrence than in the inflammatory fever, yet they are evidently attended with greater danger and more ſignal fatality. In one, the plethoric ſtate of the ſyſtem admits of the free uſe of the lancet, to moderate or remove the pernicious effects of the practice of ſweating. In the other, the general weakneſs and depreſſion both of body and mind forbid at leaſt every conſiderable evacuation, but eſpecially of the vital fluid. If ſuch unhappy effects as thoſe ſhould not be induced, yet other dangers occur equally ſerious. The nervous fever is one of long duration. Such unnatural mode of ſweating, which ſeldom or never relieves, excites often by

† Diſeaſes of the Army, p. 316. Sir John Pringle obſerved, that "a delirium would ariſe from two oppoſite errors; one from large and repeated bleedings, and the other from wine and the cordial medicines being given too early. It appears therefore how nice the principles are that regard the cure; thus neither a hot nor a cool regimen will anſwer with every patient, nor with every ſtate of the diſeaſe."—He found abceſſes of the brain on diſſection.

by the ſkin a profuſe evacuation of fluids, which greatly reduces the ſtrength of the ſyſtem, and renders it unable to ſuſtain the conflict of the fever. The nervous energy thus unſkilfully exhauſted by the treatment as well as the diſeaſe, is not ſufficient to ſupport in the conſtitution the neceſſary functions of life *. Hence ariſe the ſymptoms denoting exceſs of debility, which are among the moſt certain preſages of death.—If the fever has any tendency to putrefaction, the encreaſed heat occaſioned by the imprudent adminiſtration of ſudorifics, will haſten the putrid fermentation, which is ſo fatal to animal life. Debility alſo will accelerate its progreſs. Hence an encreaſe of the ſymptoms of putreſcency, which are always more or leſs an unhappy omen in proportion to their number, their degree, and the regularity of their ſucceſſion.

This treatment, employed in the cure of the ſynochus, (the nature of which fever has already been briefly explained) is capable of inducing every pernicious effect which has been now enumerated with regard to inflammatory, nervous

* See Greg. Elem. of Practice, § 17, where the ſymptoms of debility are enumerated.

vous and putrid fevers. While the inflammatory ſymptoms prevail at the beginning of the ſynochus, the improper adminiſtration of ſudorifics is well fitted to excite the action of the heart and arteries to a very conſiderable degree. Hence an encreaſe of the fever, and all the dangers of topical affections. In the latter ſtages of the diſeaſe, the ill conſequences mentioned under the nervous fever, follow this imprudent method of ſweating. Hence the ſymptoms of weakneſs and putreſcency are induced. The puerperal fever too, attendant on lying-in women, is very often rendered dangerous or even fatal by the ſame pernicious practice.

Having given theſe inſtances of the unhappy effects of the abuſe of ſudorifics in intermitting and continued fevers, it may be proper now to endeavour briefly to point out their Uſe.

Phyſicians univerſally acknowledge, as was before obſerved, the advantage of ſweating, when properly conducted, in the intermitting and remitting fevers. Sudorifics may with propriety often be adminiſtered in thoſe diſorders. The ſaline mixture, the ſpirit of Minderirus, tartar emetic, opium, or the emetic and ſedative in conjunction, &c. are reme-

dies

dies well fitted for anſwering this indication *. Full vomiting may be eaſily prevented, and the determination to the ſurface happily promoted.

With regard to continued fevers, it remains to be conſidered in what ſtages the practice of ſweating is admiſſible; in what manner it ought to be conducted; and what remedies are to be uſed in order to avoid its pernicious, and to obtain its beneficial effects.—No phyſician of experience doubts the utility of ſudorifics in continued fevers †. Innumerable facts, atteſted by the ableſt men of all ages, prove the propriety of their adminiſtration.

In

* "The paroxiſm may be prevented by mild ſedatives, antiſpaſmodics and diaphoretics, gentle emetics, particularly antimonials, given ſo as only to excite a nauſea; warm bath; opiates.——In the paroxiſms the views are

1ſt, To render the cold fit milder and ſhorter by—emetics, &c.

2d, To render the hot fit milder and ſhorter and accelerate the ſweating, by ſedative diaphoretics, neutral ſalts, diluents, acids,—opiates." Greg. Elem. of Practice, § 59, 60.

† Lectures on the Mat. Med. p. 490. Boerhaave Aphor. de febribus in genere, § 558, &c.

In the very beginning of the fever this practice may be adopted with ſucceſs. Sir John Pringle at this period of the diſorder is a ſtrong advocate for the uſe of ſudorifics. He is perſuaded that by this means he has frequently put a final ſtop to the progreſs of a malignant contagious fever, and once indeed when he himſelf was attacked *.—At other ſtages of the diſeaſe too, when the reaction of the heart and arteries is moderate and there is ſufficient vigor of conſtitution; when the tongue is parched and covered with a cruſt, the ſkin pale and dry, and devoid of that unctuous feel, which it naturally has in a ſtate of health; and when the urine is limpid and without any ſediment, the pulſe ſmall and contracted, and no topical affection has ſupervened which contraindicates the exhibition of ſudorifics; ſweating cautiouſly excited is ſometimes productive of the moſt ſalutary effect †.—In the progreſs

* Diſeaſes of the Army, p. 290. "In this ſtate, (viz. at the beginniug of the jail fever) ſometimes a vomit, ſometimes a change of air, will remove the diſorder, ſometimes a ſweat; I have had experience of the two laſt methods of prevention in my own caſe."

† Greg. Elem. of Practice, § 29, 72, 86, 102, &c. It is there recommended to produce an equable determination of the

progreſs likewiſe of fevers, after even a few of the firſt paroxiſms, when the diſeaſe is known to be of a very malignant nature, ſudorifics ought to be adminiſtered to promote, if poſſible, a ſpeedy and favorable ſolution of the fever, and to reſcue the patient from its deſtructive power. Hence they have always been eſteemed of ſingular utility in the moſt malignant fevers *, and in the plague †.—Or if at any period of the diſeaſe, nature points out a criſis by a ſpontaneous diſcharge from the ſkin, attended

the blood and nervous power and promote the obſtructed ſecretions by whatever takes off ſpaſm, ſedative diaphoretics, gentle emetics, antimonials, &c.

* Greg. Elem. of Practice, § 102. "A gentle emetic and afterwards procuring a diaphoreſis, often cures the fever on the appearance of the firſt ſymptoms of infection." Afterwards Dr. Gregory obſerves, "that gentle evacuations of the primæ viæ ſhould be procured, and the perſpiration promoted by mild emetics and diaphoretics."

† Vid. Traite de la Peſte.

Syden. Oper. Sect. ii. cap. ii. p. 120.—"Hujuſce autem praxeos utilitatem etſi non mente tantum ac judicio adſequor, verum etiam re ipſa, atque editis experimentis, dudum exploravi; tamen peſtilentis fermenti per diaphoreſin diſſipatio, præ ejuſdem per venæ-ſectionem evacuatione, mihi multis nominibus arridet; utpote quæ nec ægrorum vires æque proſternat, nec medium infamiæ periculo objiciat."

with an evident alleviation of the ſymptoms, it is certainly the buſineſs of the phyſician gently to promote the evacuation and forward the cure *.——Theſe and other ſtages of fevers, with their different complications and the great variety of their ſymptoms, which it is not neceſſary here to enumerate at large, require the prudent uſe of ſudorifics, and admit of relief from their operation.

One

* Hipp. Aph. 36. Sect. iv. Ἱδρῶτες πυρεταίνουσιν ἢν ἄρξωνται, ἀγαθοὶ τριταῖοι, καὶ πεμπταῖοι, καὶ ἑβδομαῖοι, καὶ ἐνναταῖοι, καὶ ἑνδεκαταῖοι, καὶ τεσσαρεσκαιδεκαταῖοι, καὶ ἑπτακαιδεκαταῖοι, καὶ μίη καὶ εἰκοστῇ, καὶ ἑβδόμη καὶ εἰκοστῇ, καὶ τριακοστῇ πρώτῃ, καὶ τριακοστῇ τελευτῇ. Οὗτοι γὰρ οἱ ἱδρῶτες νόσους κρίνουσιν. Οἱ δὲ μὴ ἔτως γινόμενοι, πόνον σημαίνουσι, καὶ μῆκος νόσου, καὶ ὑποτροπιασμούς.

Bagliv. Prax. Med. lib. i. de ſudore in acutis, p. 67.

Hipp. de Morbis Popularibus, lib. i. ſect. iii. Τὰ δὲ παροξυνόμενα ἐν ἀρτίῃσι, κρίνεται ἐν ἀρτίῃσιν· ὧν δὲ οἱ παροξυσμοὶ ἐν περισσῇσι, κρινέται ἐν περισσῇσιν. Ἔστι δὲ πρώτη κρίσιμος τῶν περιόδων, ἐν τῇσιν ἀρτίῃσι κρινομένων, δ΄. ς΄. ἡ. ί. ιδ΄. κή. λ΄. λδ΄. μή. ξ΄. π΄. ρ΄. Τῶν δὲ ἐν τῇσι περισσῇσι κρινομένων περιόδων πρώτη, γ΄. έ. ζ΄. θ΄. ιά. ιζ΄. κά. κζ΄. λά. Εἰδέναι δὲ χρὴ, ὅ, τι ἢν ἄλλως κριθῇ ἔξω τῶν προγεγραμμένων, ἐσομένας ὑποτροφὰς σημαίνοιτο, καὶ γενοῖτο ἂν ὀλέθρια. Δεῖ δὲ προσέχειν τὸν νοῦν, καὶ εἰδέναι ἐν τοῖσι χρόνοισι τούτοισι, τὰς κρίσιας ἐσομένας ἐπὶ σωτηρίην, ἢ ὀλέθριον, ἢ ἐπὶ τὸ ἄμεινον, ἢ τὸ χεῖρον. Πλανῆται δὲ πυρετοὶ, καὶ τεταρταῖοι, καὶ πεμπταῖοι, καὶ ἑβδομαῖοι, καὶ ἐναταῖοι, ἐν ἧσι περιόδοισι κρίνονται, σκεπτέον.

One general rule however may be added, the obſervance of which is of much importance. By whatever cauſes, whether natural or artificial, ſweating be induced, the practitioner ſhould always attend with the minuteſt exactneſs to its effects. If the ſweating be forced, partial and viſcid, it is ſeldom or never of the ſalutary kind *. If the febrile ſymptoms be encreaſed; if there be greater heat, anxiety, hardneſs and frequency of pulſe, head-ach or delirium, &c. the evacuation is evidently dangerous and immediately to be checked †. Or if the combination of ſymptoms, then preſent, be not relieved by the operation of the ſudorific, the phyſician, inſtead of needleſsly exhauſting his patient, ſhould ſpeedily deſiſt from an unſucceſsful practice. — On the other hand, if no encreaſe of ſymptoms can be fairly attributed to that method of treatment, but an evi-

 dent

* "The critical ſweats are rarely profuſe, but gentle, continued and equally diffuſed over the body: ſometimes the diſeaſe will terminate by an almoſt imperceptible moiſture on the ſkin." Dif. of the Army, p. 293.

† Hipp. Aph. 4. Sect viii. Ἱδρῶτες ἐν τῇσι κρισίμοισιν ἡμέρῃσι γιγνόμενοι σφοδροὶ καὶ ταχέες, ἐπικίνδυνοι· καὶ οἱ ὠθόμενοι ἐκ τοῦ μετώπου, ὥσπερ σταλαγμοὶ καὶ ῥυσνοι, καὶ ψυχροὶ φόδῳ, καὶ πολλοί. Ἀνάγκη γὰρ τὴν τοιοῦτον ἱδρῶτα πορεύεσθαι μετὰ βίης, καὶ πόνου ὑπερβολῆς, καὶ ἐκθλίψιος πολυχρονίου.

dent diminution both of their violence and number is obtained, the practitioner ought ſteadily to purſue the uſe of ſudorifics *.

With regard to the method of conducting the practice of ſweating, much caution and judgment are requiſite. Without attention to this particular, the practitioner, however judicious he may have been in the choice of his remedies, or in the time of exhibiting them, will in vain expect to relieve his febrile patient. Hence may be explained a common truth, that one phyſician ſhall with a certain remedy relieve a complaint, and another with the ſame remedy aggravate it. — Sweating ſhould never be excited in fevers by the ſtimulus of external heat. The contrary practice, however, has been as univerſal as deſtructive. Not only the heat of the fire ſhould not be too great, but the natural heat of the human body ſhould not be too cloſely confined about its ſurface. If it be, it will encreaſe the fever by its ſtimulus, in ſpite of any advantages which may be obtained from its relaxing power. — The air of the room ſhould be temperately cool, and as pure as

† Cullen's Lectures on the Practice, where this ſubject is moſt accurately diſcuſſed.

as poſſible, which, beſides its good effect of invigorating the ſyſtem, will favor a ſalutary encreaſe of perſpiration. Freſh air ſhould circulate freely about the patient, that he may not breathe a mephitic vapor, extremely noxious to animal life.—The requiſite conditions of the ſweating are, that it ſhould be free, moderate, univerſal and continued for a proper length of time. Sweating, if profuſe, is found almoſt univerſally pernicious; and if of ſhort continuance, it is ſeldom effectual, but on the contrary favors a more obſtinate formation of cutaneous ſpaſm. The ſpace of twelve hours is a moderate time for ſupporting in this gentle manner the determination to the ſurface. The practice may often be continued with advantage for twenty-four hours, or even a ſtill longer time. After the ſweating, the body is found more ſuſceptible of the influence of cold, and therefore ſhould for a while be kept rather warmer than uſual, and cooler air be admitted only by ſlow degrees. — The patient, if he has no particular averſion to it, ſhould lie in cotton or flannel †, which are preferable to linen, becauſe they are more languid conductors of heat,

† A flannel ſhirt is very convenient for this purpoſe.

heat, and therefore not apt to become ſo ſuddenly cold, and of conſequence to check a ſalutary flow of the perſpirable matter. But whether the patient be laid in cotton, flannel, or linen, his ſhirt ſhould be changed at proper intervals; which is a practice not attended with the ſmalleſt danger, provided it be done with dexterity and caution *. The evident advantage is, that a clean, warm, dry ſhirt is ſubſtituted in the place of one already moiſtened with the perſpirable fluid, which moiſture, independent of the degree of coldneſs neceſſarily produced by evaporation, obſtructs the free diſcharge by the ſkin. The reabſorption too of a ſeptic noxious vapor is prevented †.

We

* Greg. Lect. on the Practice.—Dr. Gregory obſerves on the treatment of fevers, that "the utmoſt cleanlineſs ſhould be attended to, and the linen ſhifted as frequently as can be done without occaſioning great fatigue." Elem. of Practice, § 32.

† Mr. Cleghorn obſerves that "during the times of the critical ſweats the patient's ſhirt and ſheets ſhould frequently be changed, for when once they are thoroughly wet, they do not readily abſorb the ſweat; and beſides this there is a chance leſt the morbid exhalations ſhould be abſorbed from the wet linen by the cutaneous veins and again conveyed into the maſs of blood."—Diſeaſes of Minorca, p. 191.

We come next to ſpeak of the ſudorific remedies to be uſed in the cure of continued fevers. All hot ſtimulating medicines ſhould, in general be avoided, as they are capable of inducing the moſt fatal conſequences from exceſs of reaction, from topical inflammation, or from debility and proſtration of ſtrength.

The acids and ſeveral of the neutral ſalts have been very generally employed. In the common manner of adminiſtering them, they are for the moſt part found very inefficacious. But when given in a larger doſe, they are really medicines of conſiderable utility. Inſtead of accelerating, they mitigate the encreaſed circulation of the blood. They diminiſh heat; they correct putrefaction, particularly in the firſt paſſages; they encreaſe the ſecretion of the kidnies, and ſenſibly promote the cuticular diſcharge *. Beſides thoſe effects, the vegetable acids and neutral ſalts tend to remove the conſtriction of the exhalant arteries opening into the alimentary canal, and to obviate coſtiveneſs which is very unfavourable to the ſucceſsful practice of ſweating. The vegetable acids are generally preferable to thoſe of the mineral kingdom. They

* Lewis's Mat. Med. p. 17, 393, 394.

They can be given in greater quantity, be more perfectly ſubdued by the digeſtive organs, and more intimately mixt with our fluids.—Of the mineral acids, the vitriolic is the beſt and moſt frequently uſed. The dulcified ſpirit of nitre too is an uſeful convenient remedy. Of the neutral ſalts, nitre, the ſaline mixture, the ſpirit of Minderirus or the vitriolated tartar * ſeem moſt eligible.——Acids and neutrals may be given with propriety as ſudorifics, except where a catarrh or an inflammatory affection of the lungs is complicated with the fever, and the cough exaſperated by their uſe. In this caſe, they ſhould be employed more ſparingly; and nitre, which in ſome conſtitutions is particularly liable to irritate the lungs, ſhould in general be avoided †.

Emetics, as was before obſerved, are ſafe and valuable ſudorifics. Vomiting determines power-

* Lewis's Mat. Med. p. 583.

† I lately attended a patient ſubject to an aſthmatical complaint, and in whoſe lungs I had reaſon to ſuſpect tubercles. She informed me that ſhe had diſcovered by repeated experience, that common ſalt encreaſed her cough. Dr. Cullen mentions ſeveral caſes of catarrh and aſthmatical complaints in which nitre diſagreed with the patient, even when given only by way of gliſter.

the blood powerfully to the ſurface of the body. Tartar emetic given in nauſeating doſes, is for the ſame purpoſe very efficacious. If given at conſiderable intervals, in ſtill ſmaller doſes, it may eaſily be made to act as a ſudorific, independent of its operation in exciting either vomiting or nauſea. In ſome caſes this laſt mode of exhibition, as being the leaſt fatiguing, is even preferable to any other. The uſe of the remedy for anſwering this indication ſhould not be continued above forty-eight hours*. Emetic tartar combined with opium, may, on ſimilar occaſions, be often employed with perfect ſafety and peculiar advantage †. Dr. James's Powder too, when given with judgment, has frequently been found very ſucceſsful. Sometimes its uſe has

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* "If the fever continues, in the evening following that in which the emetic was given, until the fifth day,

R. Sach. Alb. Gr. XX. Tart. Emet. Gr. ſs ad Gr. j. divid. in Pulv. ii. Capt. unum hora viii. alterum hora xi. Veſpert. cum hauſt. (N°. 4) vel ſexta quaque hora."

Fordyce's Elem. of Practice, p. 162.

† I have frequently preſcribed that remedy and with very evident good effects. Dr. Gregory in ſuch caſes recommends the uſe of ſedative diaphoretics and anodynes. Elem. of Practice, § 29.

evidently ſnatched a patient from the arms of death ‡.—Whether or no, after proper evacuations, the cure of the plague and of ſome other fevers, as well as that of the rheumatiſm, might be ſucceſsfully attempted by means of Dover's powder *, experience muſt determine.—If, during the time of ſweating, the reaction of the ſyſtem ſhould be too weak, and a gentle ſtimulus ſeem indicated, wine properly diluted, is found in fact to be the moſt eligible. The volatile alkaline ſalt in moderate doſes, is the next in choice. Its tranſitory ſtimulus, when the ſyſtem is low, may be ſafely admitted †.

Whatever ſudorific be employed, aqueous diluting fluids are abſolutely neceſſary to the ſucceſsful practice of ſweating. But if tartar

‡ Every candid man will allow that Dr. James's powder has ſometimes been preſcribed with great ſucceſs in fevers; yet it often diſappoints us.

* The compoſition of this remedy is well known. The chief ingredients in it are opium and ipecacoan. It acts powerfully as ſudorific, but is not heating or ſtimulating.

† Sir John Pringle recommends the uſe of "half a drachm of Theriaca, with ten grains of the ſalt of hartſhorn once in twenty-four hours, waſhed down with ſome vinegar whey." Appendix to diſeaſes of the army, p. 105.

tar emetic or James's powder be intended to operate as a ſudorific, diluents ſhould not be freely taken, till the remedy has been retained in the ſtomach a ſufficient time for its operation. If this caution be not attended to, the medicine will frequently be rejected by vomiting without having produced its ſalutary effects.—Water, by reaſon of its mildneſs, may be freely given without any fear of a ſtimulus; and by its fluidity, it is admirably fitted for entering the minuteſt capillary veſſels, for diſtending their cavities, and obviating their conſtriction. Beſides removing the anxiety and ſtimulus of thirſt, it tends, eſpecially when impregnated with vegetable ſubſtances, to correct the putreſcency of the fluids, which in fevers is greatly encreaſed by the morbid retention of the perſpirable matter. The water may be impregnated with the farinaceous vegetables, with tea *, ſage, balm, bardana, or with any grateful aromatic, which without ſtimulus, promotes gently the cuticular diſcharge. The palate of the patient in theſe caſes ſhould frequently be conſulted, that in conſequence of an agreeable impregnation of the water, he may without

* This is one of thoſe very few caſes in which tea is employed with advantage. Vid. Percival's Eſſays, vol. I. p. 140.

difficulty be able to drink copiouſly for the purpoſe of dilution. This caution is never more neceſſary than in the treatment of the diſeaſes of children. For if the practitioner be too buſy with medical ingredients, the child will ſometimes be ſo diſguſted, as obſtinately to refuſe every kind of diluent, a circumſtance attended with the moſt unhappy conſequence.

So much for the practice of ſweating in fevers. In Local Inflammations, the abuſe of ſudorifics has been very frequent and deſtructive. Whatever influence a ſpaſmodic conſtriction of the veſſels of a part may ſometimes have in exciting inflammation *; certain it is that an unuſual determination and an encreaſed circulation of blood takes place in the part affected. Hence may eaſily be explained the heat, redneſs, pulſation, tumor and pain, which are the common ſymptoms of inflammation †. Many

* Greg. Elem. of Practice, § 214.

† Sauvages Noſol. Method. tom. I. p. 144. Phlegmone eſt tumor ſphæroideus, rubore, calore, tenſione, dolore pulſatili inſignis, ſponte non ſuppurationem vergens. Dicitur a *phlego*, uro. Diſſert e puſtulis inflammatis, ut a variola, &c. ex eo quod ſit tumor ſubſolitarius, & multo major; a bubone, parotide, paronychia, ophthalmia, quia ſedem in certis

ny veſſels of the part, which in a ſound ſtate admitted only the ſerum of the blood to enter their minute cavities, are during the preſence of an inflammation, dilated to ſuch a degree as to admit the red globules. The general ſyſtem at the ſame time is affected with a fever, which is attended with different ſymptoms, according to the ſpecies of the inflammation and to the nature and ſituation of the inflamed part. To purſue this ſubject, and point out fully the differences which are here alluded to, would lead us too far into the conſideration of the doctrine and hiſtory of inflammation. Enough already has been ſaid, to ſhew the abſurdity of the practice of ſweating by means of ſtimulating remedies and external heat, in order to forward the cure of inflammation.—Can any practice be conceived more effective, for encreaſing the general fever as well as the local affection? Will not the circulation of the blood be accelerated, and its impetus in the part affected often dangerouſly augmented? Will not effuſions.

tis locis determinatam non habet. Cauſa eſt impetus cruoris adauctus intra vaſa partis tumentis, quæ involucris ut plurimum coercetur, ut glandula vel membrana celluloſa: Si etenim intra ramificationes vaſorum fieret ille infarctus, tumor non ſphæroideus nec certis limitibus circumſcriptus foret, ſed eryſipelatis inſtar diffuſus.

ſions be cauſed of the different parts of the blood into the cellular membrane, producing ſuppuration, fatal obſtruction or gangrene? Nothing can be more certain. Innumerable indeed are the examples which might be urged in confirmation of thoſe truths. By this means, Inflammations of the Brain, of the Lungs *, or of the Abdominal Viſcera, have frequently been made to terminate unhappily by effuſion, ſuppuration, or a gangrenous deſtruction of the part.—How often have Inflammations of the Womb ended fatally, in conſequence of the erroneous opinion, which has been and ſtill is too prevalent, concerning the ſuppoſed neceſſity of promoting the cuticular diſcharge for ſome time immediately after childbirth. It was intended to have obtained a ſpeedy recovery by ſuch practice. But the theory on which it was founded, is no leſs falſe, than the method of treatment is dangerous and unſucceſsful †. In

* Huxham obſerves that the antients in difficult caſes, uſed very powerful expectorants in the inflammation of the lungs, viz. galbanum, muſtard, pepper; in deſperate caſes, white hellibore, elaterium, Ανθος χαλκυ were adviſed. Eſſay on Fevers, p. 203.

† It is greatly to be lamented that this prejudice ſhould be ſo prevalent, even as it is at preſent. For there are many

In the Rheumatiſm and in the Gout, the practice of ſweating has been univerſally adopted, and often productive of pernicious conſequences; not becauſe the curative indication itſelf is erroneous, but becauſe it has been too frequently purſued in an imprudent manner. Hence, in thoſe diſorders which are often of long duration, the conſtitution itſelf is materially injured by the miſmanagement of ſudorifics *. But truly it is an error too common, to attend only to the preſent diſeaſe, while the future health of the patient is diſregarded. The vigor of the ſyſtem, by that inattention, is not only much impaired, but the diſeaſe itſelf is often rendered worſe, and of more difficult cure. Tho', from ſuch injudicious practice, the complaint ſhould admit of ſome preſent alleviation, yet it is more apt to return, and generally with an encreaſe of violence or of danger.

Theſe

many practitioners who ſtill continue in that error. But it is to be hoped, that in a ſhort time this as well as many other prejudices, ſo pernicious to child-bed women, will be happily exploded.

* I have ſeen ſeveral unfortunate caſes of the gout, where the conſtitution of the patient was greatly injured by the imprudent uſe of external heat and ſudorific remedies. Weakneſs, relaxation and irritability were the conſequences of ſuch pernicious treatment.

Theſe facts are true in reſpect both to the gout and the rheumatiſm. In the gout, the debilitating effects of the treatment are more particularly felt. The weakneſs induced, prediſpoſes to the irregular ſpecies, and tends conſiderably to augment the ſeverity and miſeries of the diſeaſe.

It is obſervable, nevertheleſs, that ſudorifics, cautiouſly exhibited, are very valuable remedies both in the rheumatiſm and in the gout *. They ſhould not however be in general of a ſtimulating nature. The external heat ſhould be moderate; the natural warmth and exhalations of the human body not too much confined upon its ſurface. The general rules before mentioned, in regard to the method of conducting the practice of ſweating in fevers, are moſt of them applicable in the preſent caſes. — The remedies to be employed for this purpoſe in the gout, are the neutral ſalts, mild aromatic woods, ipecacoan, tartar emetic alone or in conjunction with opium, and alſo other ſedatives or ſtimulants as occaſion may require. Acids are frequently found pernicious, and there-

* Boerhaave obſerves in the cure of the gout, Sudorifera ex arte inſtituta plus proficere. Aphor. 1272.—Vid. Van Swieten Comment. ibid.

therefore ſhould not be uſed in the gout.—In the rheumatiſm, the ſudorific medicines preſcribed in fevers, may, under proper conditions of the diſeaſe, be adminiſtered with ſingular utility. Dover's powder too has of late been given with unexpected ſucceſs. The moſt excruciating pains have been quickly and effectually removed by its ſalutary action. The common doſe of it is from a ſcruple to a dram. It acts powerfully as an antiſpaſmodic and procures ſweating with little ſtimulus. It may be given in the acute rheumatiſm with perfect ſafety, as ſoon as the violence of the ſymptomatic fever is taken off by bleeding*. It is alſo well adapted to the cure of the chronic rheumatiſm, in which it has been given with ſucceſs, when every other ſudorific had been tried in vain †. Yet ſo much

* Cullen's and Gregory's Clinical Lectures.

† Dr. Monro obſerves that he frequently found Dover's powder ſucceſsful in rheumatiſm after proper evacuations, when the milder ſudorifics had failed. In ſome caſes he obſerves, that where mild diaphoretics were ineffectual, ſweating with gum guaiac, Dover's powder, and ſuch other medicines, after the fever was gone, removed the complaint. Diſeaſes of Military Hoſpitals, p. 146.——Sir John Pringle remarks that "ſince the two firſt editions of theſe obſervations, I have uſed in the rheumatiſm when there was no fever,

depends upon the proper method of its adminiſtration, that I have known one phyſician repeatedly preſcribe Dover's powder without advantage; when another, more ſagacious, has happily removed that very diſeaſe by the judicious uſe of it. For though the remedy was the ſame, yet the mode of exciting the cutaneous excretion was extremely different.

After the inflammations, I ſhall juſt mention the abuſe of ſudorifics in Eruptive Diſorders. Theſe are almoſt univerſally febrile, but diſtinguiſhed from fevers by an eruption upon the ſkin. The plague has been frequently comprehended under this claſs of diſeaſes by ſeveral eminent noſologiſts, but not with the ſtricteſt propriety *. The fevers which accompany thoſe diſorders, are in different caſes of different genera, ſpecies and varieties, from thoſe

ver, Dr. Dover's powder, giving for ſome nights about 20 or 25 grains of it at bed-time, with plenty of ſome warm diluting liquor and laying the patients in blankets." Diſeaſes of the Army, p. 162, note †.

* Sauvages and Linnæus have claſſed the plague among the eruptive diſorders. Dr. Cullen, in his Noſol. Method. Synop. has given it the ſame place, yet in his practical Lectures, he doubts the propriety of it. Vogel has claſſed it among the Febres.

thoſe of the mildeſt ſort which terminate in the ſpace of a few hours, to the moſt obſtinate malignant petechial fevers. The eryſipelas, the plague, the ſmall-pox, the meaſles, the thruſh, the miliary and ſcarlet fevers, with a few more of the ſame order *, are at preſent the objects of our conſideration. Sudorifics in theſe diſorders have been almoſt univerſally in uſe, and with every additional circumſtance which could render them miſchievous in their effects. Many practitioners and patients formerly believed it advantageous to promote almoſt every kind of eruption as much as they could, becauſe they had had no experience of a different method of treatment. They found means fitted to

* Under the ſame claſs are comprehended the varicella, urticaria and pemphigus. The varicella is defined, Synocha. Papulæ poſt brevem febriculam erumpentes in puſtulas variolæ ſimiles, ſed vix in ſuppurationem euntes; poſt paucos dies in ſquamulas, nulla cicatrice relicta, deſinentes.—The Urticaria is defined, Febris amphemerina contagioſa. Die ſecundo rubores maculoſi, urticarum puncturas referentes, interdiu fere evaneſcentes, veſpere cum febre redeuntes, et poſt paucos dies in ſquamulas minutiſſimas penitus abeuntes.—The Pemphigus is Typhus contagioſa. Primo, ſecundo, aut tertio morbi die, in variis partibus veſiculæ, avellanæ magnitudine, per plures dies manentes, tandem ichorem tenuem effundentes. Synop. Noſol. Method. p. 290, 293, 294.

anſwer their indication in ſtimulants and external heat.

The effects were every way anſwerable to the method of practice. — The eryſipelas has been frequently made to terminate in internal inflammations, particularly of the brain, which have been followed with the moſt unhappy conſequences.—The plague is uſually attended with a malignant, nervous, putrid fever, from which it is in general diſtinguiſhed by ſwellings of the lymphatic glands in different parts of the body, or by the appearance of carbuncles. This diſeaſe is ſometimes ſo extremely mild as to require no medical aſſiſtance. But often the contagion is of the moſt deleterious nature, and proves ſuddenly fatal. In other caſes where the conſtitution is able to make reſiſtence againſt the ſedative impreſſion of the infection, the diſeaſe is of conſiderable duration, and then becomes properly the object of medical practice. The plague indeed is of itſelf ſufficiently mortal. That part of the practice of medicine in this complaint, might have been diſpenſed with, which for many centuries has conſtantly tended to aggravate miſeries, that, excluſive of its aid, were as heavy as could well be endured. The moſt important

part

part of the treatment of the peſtilential fever, has generally turned on the uſe, or ſhould we not rather ſay, on the abuſe of ſudorifics *. The ill conſequences attendant on that method of cure in the plague, are ſimilar to thoſe which have been enumerated under the article of fevers, but if poſſible more unhappy †. The beſt way of preventing them in the plague is alſo the ſame ‡. The lateſt and moſt eminent phyſicians, who have had opportunity of practiſing in that diſtemper, have at length diſcovered the errors of their unfortunate predeceſſors, who, by a moſt injudicious exhibition

* Greg. Elem. of Practice, p. 109.

† Atqui et hæc difficultatibus ſuis non vacat; primo enim multis, ac præſertim calidioris temperamenti juvenibus, ſudores ægrius proliciuntur; cujuſmodi ægrotos, quo hydroticis fortioribus, ac cumulatiori tegumentorum pondere diaphoreſin conciere ſatagas, eo in manifeſtius phrenitidis periculum adduces; aut quod triſtioris adhuc ominis eſt, vana ſpe aliquantiſper luctatus tandem, pro ſudoribus, exanthemata peſtilentialia elicies. Sydenham de Peſte, p. 120.

It is obſervable that inflammations and gangrene of the viſcera, particularly of the brain, were generally found on diſſection of thoſe who died of the plague, when it laſt raged at Marſeilles. Traite de le Peſte, part 1.

‡ Traite de la Peſte.

tion of heating ſudorifics and by profuſe ſweating, have added greatly to the devaſtations of the plague. If the modern improvements in the treatment of fevers were adopted in that of the peſtilential diſeaſe, there is great reaſon to believe they would be found beneficial. — With regard to the ſmall-pox, every practitioner is now fully convinced, that to moderate the fever, and to leſſen the number of the puſtules by the cool regimen, is of infinite importance to the ſucceſsful treatment of the diſeaſe. As the variolous fever is very different in different caſes, it is obvious that all the pernicious effects ſubſequent on the imprudent practice of ſweating in fevers, may flow from the ſame practice in the ſmall-pox. To theſe we may add the great increaſe of the number of puſtules. The ſoreneſs of the external ſurface renders this practice, which of itſelf is ſo extremely contrary to reaſon, doubly offenſive and dangerous. The improper adminiſtration of ſudorifics in the ſmall-pox, has ſometimes produced a ſtrong action of the veſſels, with internal local inflammation, ſuppuration or mortification; and ſometimes it has encreaſed the ſymptoms of debility and putrefaction, with every unfavorable appearance of the puſtular eruption.

We

We ſhall now conclude this article of abuſe. From what has been already obſerved, general rules may eaſily be applied to particular caſes, and the errors of the practice of ſweating further aſcertained. It need not be ſaid that the imprudent uſe of ſudorifics in the Meaſles or in the Scarlet Fever *, where the encreaſed action of the heart and arteries generally prevails, has in numberleſs inſtances excited the moſt fatal topical determinations of blood, and an unhappy train of ſubſequent affections.—Nor is it neceſſary to mention the Miliary Eruption, which is generally ſymptomatic and conſequent on injudicious ſweating †. This eruption may accompany any fever, whether inflammatory, nervous, petechial, catarrhal, rheumatic, peſtilential,

* Sauvages Noſol. Method. tom. I. p. 453. Scarlatina, phlegmaſia eſt exanthematis maculoſis, rubris, crebrioribus, latioribus, & multo magis rubentibus, at non perinde uniformibus, ac ſunt illæ mæculæ quæ rubiolam ſtipant; illæ pariter farinoſis ſquamulis terminantur, ſed ſine præludio catharrhali enaſcuntur, & ad ſecundam, tertiamve vicem ſe produnt ac recundunt viciſſim.

† Sir John Pringle in his Appendix, p. 101, obſerves with Sydenham and Dr. de Hain, "miliaria exanthemata frequentius mala arte (regimine calidiſſimo) progigni, ſponte longe rarius."

lential *, &c. But what is not a little ſurpri-zing, the very practice which moſt ſucceſsfully produces the eruption, has often been abſurdly continued to forward its removal †.— It is unneceſſary alſo to mention the abuſe of ſudorifics in many other acute diſeaſes, which have not been conſidered in this ſection.—Nor is it meant to adduce examples from all the various claſſes of chronic diſorders; many of which have been greatly augmented by the injudicious and continued uſe of ſudorifics. The common ill conſequences

* 1. Febris purpurata vel miliaris nomen tenet a puſtulis rubris vel albis, ſeminis milii ſpeciem præ ſe ferentibus.

2. Diſtinguitur, 1. In rubram & albam; in priore puſtulæ rubræ, in poſteriore albæ ſunt. 2. In Idiopathicam & ſymptomaticam; ſæpe enim conjungitur cum variolis, morbillis, & diverſis Febribus.

3. Adoritur laxos habitus; temperamenta phlegmatica; infantes & ſenes ſæpius quam adultos; fæminas ſæpius quam viros, & inter illas nobiliores, delicatas, fluore albo affectas, & ſæpiſſime puerperas; quia humores in harum vaſis uterinis ſtagnant & corrumpuntur, & multum ſudant. Home's Principia, p. 168.

† "It is impoſſible to ſay any thing in regard to the cure, as theſe eruptions are ſymptoms of fevers of oppoſite kinds, and requiring oppoſite management; and as they are ſo generally the mere effects of a hot regimen and profuſe ſweating." Greg. Elem. p. 93.

ſequences of unneceſſary ſweating are in ſuch caſes unavoidably induced. The ſymptoms of weakneſs and irritability, ſo frequently attendant on theſe complaints, are greatly aggravated by all ſuch unſeaſonable practice. The original diſorders are of courſe encreaſed; they are rendered more painful, more dangerous, and ſometimes even fatal.

SECTION IV.

OF

BLISTERS.

THE application of BLISTERS is now become a very univerſal practice. The needleſs prejudices which have long prevailed againſt them, are almoſt ſunk into oblivion. Their ſafety and utility in numberleſs diſorders is clearly evinced beyond the poſſibility of a doubt. Such indeed is their efficacy, and ſo much leſs conſiderable the ill conſequences of their imprudent uſe, that, in treating on this ſubject, we ſhall be obliged to dwell chiefly on the abuſe of medicine ariſing from the neglect of bliſters. We ſhall have occaſion likewiſe to ſhew the advantages which may be obtained from their judicious application.

The operation of blisters on the system has been very differently accounted for by different practitioners, but does not yet appear to be correctly ascertained. It has been said to depend chiefly on the power of cantharides in dissolving or attenuating the viscidity of the blood. But the very small quantity which is absorbed, cannot be supposed, with the least colorable appearance of truth, to be capable of producing such an effect on the general mass of the circulating fluids*. It may also be safely affirmed, that in fact the supposition is found altogether destitute of support. The consistency of the blood does not appear to the accurate and judicious observer to be in the least affected by the operation of a blister. Experience confirms the truth of this assertion.

The principal action of cantharides must undoubtedly be sought for in their effects on the moving fibres. — Blisters stimulate and inflame the part to which they are applied, and cause to it an encreased determination of blood, attended

* Baglivy was of opinion, that the absorbed cantharides dissolved the lentor of the blood. But this opinion is fully refuted by Dr. Percival. Vid. Essays Med. and Experim. vol. I. p. 187.

tended with heat and redneſs, but not generally with much pain or ſwelling. The inflammation is rather eryſipelatous than phlegmonic. From the greater impetus of the blood in the part, an effuſion of ſerum under the cuticle is induced, which ſeparates it from the true ſkin.

With regard to the general ſyſtem, the operation of bliſters as ſtimulant has in ſeveral inſtances been correctly aſcertained. Their ſtimulus however is generally topical, and ceaſes to act on the effuſion of the ſerum or the removal of the plaiſter, though it is ſometimes communicated to the whole ſyſtem, producing much pain, with an evident encreaſe both of the hardneſs and frequency of the pulſe *. Yet the degree of their ſtimulus is often ſo inconſiderable, that it would be impoſſible to explain the action of cantharides on this principle alone. In caſes of local inflammation, bliſters are very univerſally recommended as a moſt important remedy. In ſuch diſeaſes they are often applied, and inſtead of cauſing the leaſt encreaſe of the general circulation, they evidently diminiſh the heat of the body, and the hardneſs and frequency of the pulſe, in conſequence of leſſening

* Cullen's Lectures on the Practice.

leſſening the irritation ariſing from the local affection *. Had the ſtimulus of the Spaniſh flies on the general ſyſtem been conſtant and permanent, the application of them in all diſorders of that kind muſt have proved highly injurious. But in fact we find the contrary to be the truth. I ſhall ſoon have occaſion to mention the ſingular ſucceſs of their uſe in local inflammations.

Beſides their ſtimulating quality, it is very evident that cantharides act upon the moving fibres as powerfully antiſpaſmodic †. Hence their great utility in ſpaſms of the ſtomach and inteſtines, in the convulſive aſthma, and numbers of other ſpaſmodic diſeaſes, in which they have frequently given ſenſible relief before any evacuation was produced ‡.

At

* Whytt's Experiments, Ph. Tranſact. vol. L. p. 2.

† Diſeaſes of the Army, p. 141. "The objection to the practice (of bliſtering in pleuriſies) is founded on the ſtimulating quality of the cantharides, but the relief is ſo certain, that theory ought only to be employed here in accounting for the reſolution of an internal ſpaſm, or obſtruction, by ſuch a ſtimulus upon the ſkin."

‡ Ibid. p. 150. "As I have more than once known the patient relieved in his bowels as ſoon as he felt the burning of

At the ſame time it cannot be denied with truth, that the evacuation itſelf contributes alſo to the ſalutary effects of the remedy. It is often made with peculiar advantage from veſſels, which communicate with thoſe of the part affected. The blood by this means is artificially determined from one part to another leſs eſſential to life. Although there are many caſes where the utility of bliſters cannot be referred to their evacuation alone, yet this effect is ſometimes of ſuch importance in explaining their action as well to deſerve attention. There are phyſicians of eminence, who conſider bliſters as uſeful in febrile diſorders by removing, in conſequence of their evacuation, the tenſion and ſpaſmodic conſtriction of the extreme cutaneous veſſels. They remind us of the infinite communications of the blood-veſſels of the ſkin. They argue from thence, that an evacuation from any one part may have conſiderable influence, in relaxing the capillary veſſels and obviating their conſtriction.

We

of his ſkin (from cantharides) and at the ſame time have ſtools by a purge or clyſter, which had been given before without effect, we have reaſon to believe that the bliſter acts more as an antiſpaſmodic than an evacuant."

We may further take notice of another particular relative to bliſtering. Two inflammations at one and the ſame time are ſeldom vigorouſly ſupported in the human body. The decline of one inflammation is uſually attendant on the riſe and encreaſe of another*. Hence by exciting an external inflammation of the ſkin with cantharides, we imitate a ſalutary effort of nature, which frequently ſucceeds in the cure of one inflammation by ſubſtituting another.

With regard to the Unneceſſary Application of bliſters, the ill effects of the practice may be eaſily aſcertained from the obſervations which have been already made concerning their uſe. It is obvious that they unneceſſarily cauſe pain, inflammation and evacuation. They ſometimes unſeaſonably excite the nervous energy. If their application be frequent and their effects continued, they produce a permanent change in the mode of circulation †, and eſtabliſh the neceſſity of a needleſs and therefore of a pernicious evacuation from the circulating fluids. The conſtitution

* Fordyce's Lectures on the Practice of Medicine.

† Duncan's Elem. of Therapeutics, p. 138.

tion becomes habituated to reſtore the loſs; and thus the balance between what is taken into the body and what paſſes off by its ſeveral out-lets, is in danger of being deſtroyed *. If in this condition of the animal œconomy, the evacuation be ſuppreſſed, plethora will ſometimes occur, unleſs it be guarded againſt by abſtinence and exerciſe.

Bliſters no doubt have been often applied in caſes where they were improper, but generally the abuſe of medicine in this particular has ariſen from neglect or miſmanagement. Before we proceed to confirm the truth of this aſſertion, we cannot but reflect on the great variety of opinions which have prevailed among practitioners, concerning the uſe of veſicatories in numbers of diſeaſes. The theory of medicine in this inſtance has not been more vague and contradictory than the practice. This indeed is, among many others, a concluſive argument to prove the influence of theory on the practice of medicine. Some phyſicians ſuppoſing bliſters to be conſtantly ſtimulant to the general ſyſtem,

* Iſſues and Setons too have the ſame effect, and are frequently employed without the leaſt neceſſity. When they are dried up ſuddenly, diſagreeable conſequences often enſue, if proper means for preventing thoſe conſequences are not made uſe of.

have induſtriouſly avoided the uſe of them in inflammatory fevers *, even when thoſe fevers were attended with local inflammation. Others, regardleſs of their ſtimulus, have with the greateſt freedom employed them promiſcuouſly in almoſt every inflammatory diſorder. Cautious in avoiding each extreme, we ſhall endeavor to point out the abuſe of bliſters, and to regulate the uſe of them not by the fallacy of hypothetical reaſoning, but by facts founded on the ſolid baſis of experience.—We ſhall dwell chiefly on the practice of bliſtering in Fevers, as that is a ſubject of the greateſt difficulty and importance.

In the inflammatory fever unattended with topical affection, but in which the ſymptoms of a vigorous reaction of the ſyſtem prevail, we avoid the application of a bliſter. Its ſtimulus, though not great, may in ſome meaſure encreaſe the action of the heart and arteries; but if it happen to be conſiderable (as it ſometimes really is) the good effects of it as antiſpaſmodic and evacuant will not compenſate the ill effects ariſing from its ſtimulating power †. By this means the

* Huxham on Fevers, p. 11.

† Huxham gives particular cautions concerning this fact. Sir John Pringle and other eminent phyſicians particularly recom-

the heat of the body, and the hardneſs and frequency of the pulſe will be encreaſed, accompanied with greater thirſt, reſtleſſneſs, anxiety and pain. Nor is it uncommon in ſuch caſes to miſtake the cauſe of that encreaſe of ſymptoms; to have immediate recourſe again to the uſe of bliſters; and with the unhappy addition of ſtimulating antiſpaſmodics or ſudorifics, to endanger greatly the patient's life *.

In the beginning of every fever accompanied with an encreaſed action of the heart and arteries, although in its progreſs that fever ſhould become nervous or putrid, bliſtering is for the ſame reaſon a precarious remedy. It is granted however, that when bliſters do not ſtimulate the general ſyſtem, they will prove ſer-

 viceable.

recommend their uſe in the advanced ſtate of the inflammatory fever, unleſs ſome particular ſymptom require their more immediate application.

* Fordyce's Elem. of Practice, p. 163. "If the ſymptoms of the firſt ſtage ſhould encreaſe with great violence in the ſecond week, particularly delirium, bliſters are often applied to the head and back with advantage; but bliſtering the patient from head to foot from this time to the end of the diſeaſe, exhauſts his ſtrength, quickens the pulſe, produces petechiæ, renders the ſyſtem extremely irritable and ſometimes produces ſubſultus tendinum and convulſions."

viceable. But certainly it is prudent to defer the uſe of the remedy, till that period of the diſorder occurs, in which it may be ſafely employed without any hazard at all. This caution is more particularly to be obſerved, ſince continued fevers in general are obſtinately of a determined duration, and will purſue their courſe in ſpite of the application of a bliſter *. The practitioner will not have acted wiſely, if, at the moſt critical juncture when a veſicatory would prove highly uſeful and effective, he finds that, in purſuance of his own advice, the moſt convenient place for its application has been previouſly occupied, and at that period of the diſeaſe too when the utility of the practice was uncertain.

It is proper alſo to caution againſt the uſe of bliſters in thoſe ſtages of fevers, where the ſyſtem labors under a high degree of mobility, without any fixt pain or topical determination

* Sir John Pringle obſerves, that he found the ſolution of a fever was not to be procured by the application of a bliſter. Diſ. of the Army, p. 130.—Dr. Monro, in his diſeaſes of the Mil. Hoſ. p. 17, note (k), obſerves, that though he frequently applied a bliſter early, it had not the effect of ſtopping the fever in ſuch a manner as Dr. Lind mentions.

nation of blood. In ſuch caſes the utility of bliſtering is ſeldom conſiderable, though the irritation excited by it is frequently injurious †.

But when the fever is purely nervous, with a weak frequent pulſe, with little encreaſe of heat, and great depreſſion both of mind and body, the early application of a bliſter cannot be improper. If the fever be a ſynochus, we may, when the ſymptoms of the nervous fever begin to appear, have recourſe ſafely to bliſtering. In the progreſs of the diſtemper, although it prove nervous and putrid, the uſe of veſicatories, when the ſymptoms of the inflammatory fever have diſappeared, is now as univerſally as juſtly recommended. We have then nothing to fear from their ſtimulating powers; and as to their reſolvent powers, they are merely conjectural. In putrid fevers there is no juſt foundation for rejecting the application

† Percival's Eſſays, tom. I. p. 201. "Whenever nervous fevers are accompanied with little pain, but with a high degree of irritability, which is not unfrequently the caſe, bliſters I think will be found to be prejudicial, by encreaſing the ſpaſm, and throwing the ſyſtem into confuſion."

cation of bliſters on account of their ſuppoſed attenuating effect. The moſt unqueſtionable authorities might be adduced in ſupport of this practice *. We would, however, adviſe againſt the uſe of them in thoſe putrid fevers, in which the putreſcent tenuity of the blood has proceeded to a very high degree, accompanied with extreme proſtration of ſtrength. In ſuch caſes, as Dr. Percival has judiciouſly obſerved, a copious evacuation of bloody ſerum has viſibly ſunk the patient, and the inflammation has ſometimes terminated in a fatal gangrene †.

In the advanced ſtate of contagious fevers, when the ſymptoms of debility prevail with a ſtupor and a comatoſe affection, the indication for the uſe of cantharides becomes evidently ſtrong.

* Sir John Pringle recommends bliſters in the laſt ſtate of his jail fever, which is frequently attended with a high degree of putrefaction. Diſ. of the Army.—Dr. Monro too adviſes their uſe when petechiæ have appeared. Diſ. Mil. Hoſ. on the malignant fever.—Riverius obſerves, ubi maxima eſt malignitas, unicum veſicatorium non ſufficit, ſed plura admovenda ſunt. Riverii Opera, p. 541.—Etmuller ſays, Si ulla eſt febris in qua veſicatoria conveniunt, eſt imprimis petechialis. Opera Etmuller. p. 365.

† Percival's Eſſays, vol. I. p. 204.

ſtrong. In ſuch caſes their action as ſtimulant and antiſpaſmodic is particularly proper. The evacuation of ſerum, however uſeful it may be found in the cure of topical affections, is too inconſiderable, except in extreme debility and putrefaction, to operate by weakening the general ſyſtem. At the ſame time a morbid lethargy ſhould be cautiouſly diſtinguiſhed from a ſalutary propenſity for ſleep; from which the patient is eaſily wakened, and finds himſelf ſenſibly refreſhed. This ſleep is frequently attendant on the favorable criſis of a fever. It is a critical ſymptom, eaſily diſcoverable by a greater ſtrength, ſlowneſs, regularity and ſoftneſs of the pulſe; by a decreaſe of delirium; by a moiſtneſs and cleanneſs of the tongue; by longings for particular kinds of aliment with real returns of appetite *; by a warm gentle univerſal moiſture upon the ſurface; and by the urine becoming gradually paler, depoſiting at the bottom of the glaſs a light, incoherent and uncircumſcribed ſediment †. A ſleep attended with ſuch happy ſigns

* Proſper Alpin. de preſag. vit. et mort. egrot. p. 268.

† The appearance of the urine in fevers is ſo very various that one can ſcarce ſpeak with certainty upon that ſubject. Dr.

ſigns of returning health, ought not to be diſturbed by the officious practitioner, who repeatedly teazing his patient with needleſs bliſters, is at once both ignorantly cruel and abuſive of his art.

Beſides the two ſpecies of phrenetic delirium which I have explained when ſpeaking of the abuſe of the lancet, and the low delirium indicating depreſſion of the vital power, there is a fourth ſpecies which deſerves to be cautiouſly diſtinguiſhed. It is termed by Dr. Cullen the Maniacal delirium of fevers *. It is a prognoſtic

Dr. Gregory obſerves, when treating on the nervous fever, that "no concluſions can be drawn from the ſtate of the urine, which often in the beginning lets fall a natural ſediment, and often, after the fever is removed, has no ſediment for many days." Elem. of Practice, § 82.—Sir John Pringle obſerves, that towards the end of the jail fever, upon a favorable criſis, the urine becomes thick, but does not always depoſite a ſediment. Diſ. of the Army, p. 292.—Dr. Cullen has alſo obſerved the ſame appearance to occur in fact, but has aſſerted in his Clinical lectures that the urine, upon a favorable criſis, has, according to his obſervation, generally put on the appearance above-mentioned.

* This is the term that Dr. Cullen has applied to this ſpecies of delirium, which I am going to deſcribe. It very frequently occurs in fevers; its ſymptoms have often been accurately enumerated, but no name has been given to them.

noſtic of a moſt dangerous nature, appearing generally in the advanced ſtage, and accompanied with ſymptoms of weakneſs and irritability. It is eaſily diſtinguiſhed from every other kind of delirium, except the phrenetic which ariſes from a topical determination of blood to the head and an inflammation of the brain, when at the ſame time the general ſyſtem is weak and depreſſed. With this delirium, ſerious however as the conſequences may be, it is very apt to be confounded. For the patient, previouſly complaining of a fixt pain in the head, becomes furious and ungovernable, with redneſs of the face, ſuffuſion of the eyes, and other marks of topical determination to the head. Yet this delirium, as diſſection clearly proves, is not followed with inflammation of the brain *. It is in general of a more tranſitory

The term Phrenetic ſhould be confined to that ſpecies of delirium in fevers, which precedes or accompanies an inflammation of the brain. Hence the neceſſity of the term *maniacal*.

* Cullen's Clinical Lectures.

Dr. Gregory too is of the ſame opinion. When, ſpeaking of the combination of ſymptoms which conſtitute phrenſy, he obſerves, that "inflammation of the brain, ſuppuration, effuſion, &c. are found on diſſection, but ſometimes nothing preternatural in the head." Elem. of Practice, § 251.

nature than the phrenetic delirium *, which is a circumſtance deſerving the ſtricteſt attention. In its progreſs, it degenerates into a delirium of the low kind, denoting a moſt dangerous collapſe of the brain. It is frequently relieved by the application of a bliſter to the head, which in this caſe is far preferable to one applied to any other part of the body †.

In the laſt place, I muſt caution againſt the neglect of bliſters in fevers, where topical determination and inflammation ſupervene, whether accompanied with ſymptoms of a ſtrong action of the veſſels, or with thoſe denoting a ſtill more dangerous ſtate from the exceſs of debility. For whether the determination be to the brain ‡, the throat, the lungs or the abdominal viſcera ‖, the early application of a bliſter as near as poſſible to the part affected, is, after proper evacuation by general or topical

* In the phrenetic delirium, the inflammation of the brain is either preſent, or ſoon comes on if the proper means of cure are neglected.

† Greg. Elem. of Practice, p. 127.

‡ Pringle's Obſervations, p. 316.

‖ The ſymptoms diſcovering ſuch determinations to thoſe particular parts have been before enumerated.

cal bleeding, a laudable eſtabliſhed method of practice *. The irritation ariſing from the local affection of an internal organ, is uſually ſo great in itſelf, that the tranſitory ſtimulus of a bliſter is trifling and imperceptible in its effects upon the general ſyſtem. On the other hand, the relief obtained from the operation of the remedy will diminiſh the ſymptoms of irritation ariſing from the topical diſeaſe, as heat, pain, anxiety, quickneſs of pulſe, &c. For the antiſpaſmodic power of cantharides in thoſe caſes is ſingularly efficacious, as well in the removal of the local ſpaſm of inflammations, as of the cutaneous conſtriction of the ſurface. An external inflammation, thus artificially excited in imitation of a ſalutary effort of nature, will tend to leſſen the internal one. The evacuation too, however inconſiderable with reſpect to the general maſs of the circulating fluids, is important in many caſes of topical inflammation. When the bliſter is applied to the head in local affections of the brain or of its membranes, the evacuation from the external

* Phyſicians ſeem perfectly agreed with regard to this part of the practice. There is one or two exceptions to be made in ſome particular inflammations of the abdominal viſcera, which will be mentioned when we ſpeak of the abuſe of bliſters in topical inflammations.

veſſels has conſiderable effect upon the internal ones, which, as anatomy evidently teaches, communicate through the bones of the head with the external by innumerable inoſculating branches *. A knowledge of the connection of the brain with its membranes by means of blood-veſſels, will ſerve to explain the effects of the evacuation upon the brain itſelf, in leſſening the congeſtion of blood in that organ. The ſame argument holds ſtill more forcibly in favor of the evacuating power of cantharides in the inflammation of the throat, where the communication of blood-veſſels, between the internal and external parts, is more conſiderable. This reaſoning too is in ſome meaſure juſt, with reſpect to the uſe of bliſters in the inflammations of the breaſt and of the abdomen. The pleura and peritoneum form the connecting medium between the contained and the containing parts of each cavity. Hence may be derived the effect of the topical evacuation, conſidered merely as an evacuation from communicating veſſels, which effect is greateſt when the membranes lining thoſe cavities are themſelves inflamed.

In

* Monro's Lectures on Anatomy.

In all cases it is advisable to remove the blister as soon as it has produced an effusion of serum under the cuticle. For this purpose it will in general suffice if it remain upon the part twelve or sixteen hours. If it be permitted to remain thirty or forty hours, which is the custom with some practitioners, the cantharides are much more apt to be absorbed into the mass of blood, and when separated from it by the kidnies, to irritate the neck of the bladder and to excite the painful sensation of strangury *. This symptom ought always to be cautiously guarded against by the free use of aqueous mucilaginous fluids. If it happen to occur, it may also be removed by the same means. The blister, if there should be strangury during its operation, should be immediately taken off. In some constitutions the Spanish flies will, in spite of the utmost caution, produce this disagreeable symptom. In general, however, the prudent practitioner will not be disturbed with its occurrence; for strangury, I fear, is often the pernicious consequence of inattention.—In all cases of topical affection, it has been said that the blister should be applied as near as possible to the

* Vid. Percival's Essays, p. 196, where it is clearly proved that the strangury arises from the absorption of the flies.

the part affected, whether that part be the head, the breaſt or the abdomen. The head is more inſenſible to the ſtimulus of cantharides than moſt other parts of the human body, and therefore very convenient for the application of a bliſter, when no particular circumſtance of the fever determines our choice more eſpecially to any other part. If upon ſhaving the head, the cuticle through careleſſneſs ſhould be cut with the razor, every ſmall wound ſhould be covered with ſome common plaſter; otherwiſe the cantharides will be abſorbed and ſtrangury induced. The veſicatory, when applied to the ancles, is apt to operate ſlowly and in an imperfect manner, eſpecially if the part be not cautiouſly kept warm. The arms and thighs are ſufficiently commodious for the general purpoſes of bliſtering. The back has no peculiar advantage over any other part; but on the contrary is ſometimes found, when bliſtered, to diſturb the patient's reſt by rendering him uneaſy in a recumbent poſture.—Before the plaſter be applied, it is proper to interpoſe a piece of fine muſlin between the ſkin and the Spaniſh flies, in order to facilitate the removal of it after its operation. This caution is particularly proper in all thoſe caſes, where we are anxious to avoid the ſlighteſt de-

gree

gree of unneceſſary irritation; for irritation, however induced, is not unfrequently experienced to be of pernicious conſequence in fevers. In ſome inſtances indeed, where the cuticle has been careleſsly removed with the bliſter, the ſubſequent pain from the application of any common plaſter has been ſo exquiſitely acute, as dangerouſly to irritate the ſyſtem, to throw it into various irregular commotions and to bring on an unexpected train of alarming ſymptoms *.

After having thus treated on the general effects of bliſtering and the particular uſe and abuſe of it in fevers, it is intended to make only a few remarks concerning that remedy on the ſubjects of inflammations, febrile eruptions, hemorrhages and chronic diſeaſes.

Relative to the abuſe and neglect of bliſters in Primary Inflammations, we have ſcarce any thing to add to the obſervations already made on the ſymptomatic inflammations in fevers. It may however be juſtly repeated that the abuſe of medicine, from the neglect of the application of them, is much more ſerious in fact than one would naturally have expected.

Bliſters

* Diſſert. Inaug. de febribus continuis medendis.

Blisters are almost universally useful in the phrensy, in the inflammation of the eyes, in the sore throat, in the pleurisy and peripneumony, and in all other visceral or internal membranous inflammations of the breast or abdomen *, whether phlegmonic or erysipelatous, except in the inflammations of the kidnies, the bladder and the womb, in which indeed they are properly avoided on account of the hazard of their exciting strangury. — In the acute rheumatism while the inflammatory symptoms subsist, and the pain is continually moving from one part to another, we in general put the patient to unnecessary trouble if we have immediate recourse to blistering †. But after the inflammatory disposition of the habit, which is considered as a very principal support of the disease, is abated by blood-letting, and the pain is become fixt in

* In all these cases blisters are recommended by the most able practitioners, and those who have had the greatest opportunity of observing their efficacy. Sir John Pringle strongly recommends their use in those disorders. In the peripneumony he applies them immediately after the first bleeding, and sometimes even just before the operation was performed. Dis. of the Army, p. 142.

Fothergill on the Ulcerous Sore Throat, p. 60.

† Monro Dis. Mil. Hos. p. 150. "But it ought to be noticed that if volatile liniments or blisters are used too soon, they will sometimes occasion violent inflammation or pain."

in any particular joint or muſcle, the application of a bliſter on the part affected generally procures relief.—In the regular gout affecting an extremity, practitioners have experimentally learned the danger of the topical application of a bliſter. In ſuch caſes, it has given riſe to anomalous attacks of the moſt dangerous kind. Bliſters as well as many other local applications, muſt in this complaint give place to the ſafer virtue of a warm flannel *. But in the irregular gout, when the inflammation is fixt upon ſome internal organ, a veſicatory is a ſafe and

 effi-

* So nice is the practice in this particular, that not only a bliſter is dangerous, but I have known a patient who labored under a ſevere fit of the regular gout, faint fifteen times ſucceſſively in conſequence of imprudently putting his feet into warm water. It was with difficulty his life was preſerved. — Boerhaave, in Aphor. 1273, particularly cautions againſt all imprudent topical applications in the gout. Tum enim retenta materia apoplexias, paralyſes, deliria, debilitates, ſopores, tremores, convulſiones univerſales, ſi in cerebrum introivit; aſthma, tuſſim, ſuffocationem, ſi in pulmones; pleuritidem ſævam convulſivam, ſi in intercoſtalia & pleuram; nauſeas, anxietates, vomitus, ructus, tormina, ſpaſmos viſcerum, ſi in viſcera abdominalia; & ita incredibile quot morbos creat, ſæpe ſubito lethales. — Contingit id damni—ex omni remedio debilitante, evacuante, rurſum revellente, ſuffocante; hinc miſſio ſanguinis, purgatio ſurſum, deorſumve, emplaſtra, cataplaſmata modo dicta, &c.

efficacious remedy *. It may either be applied on the part affected, or on an extremity to induce if poſſible a regular fit †.

In Eruptive Diſorders, the attendant fever being in general either inflammatory, nervous or putrid, or variouſly formed from different combinations of thoſe, the abuſe of bliſters may upon the whole be eaſily aſcertained from the general obſervations already made, when we were pointing out their abuſe in fevers. If ſymptoms, denoting exceſs of ſtimulant power, prevail without any local affection except what is conſidered as eruptive, the ſucceſs of the remedy is uncertain. If a local inflammation of ſome

* Vid. Van. Swieten's Comment. in Aphor. 1281.

† "In every caſe where the Viſcera are attacked, all endeavors ſhould be uſed to determine the diſeaſe to the extremities by frictions, pediluvia, acrid cataplaſms, bliſters, &c. If it ſeize any of the viſcera, along with fever and the ſymptoms of topical inflammation, it ſhould be treated like any other inflammatory fever affecting the ſame part, while the above-named external applications are uſed to determine the diſeaſe to the feet." Greg. Elem. of Practice, § 404.—Dr. Cullen likewiſe cautions againſt the application of a bliſter to the feet, if there be any inflammatory ſymptoms remaining there, for in ſuch caſes he has obſerved the effects of them to be injurious by taking off the inflammation. Once a ſpaſmodic aſthma enſued.

ſome internal organ ſhould ſupervene in conſequence of the exceſs of reaction and a topical determination, bliſters, after proper evacuations, may be ſafely and efficaciouſly employed *. Or if, in the advanced ſtage of an eruptive diſorder, a local inflammation ſhould occur, proceeding from a partial determination of blood, attended with weakneſs and irritability of the general ſyſtem, the ſame practice may be happily adopted. In the progreſs of thoſe diſorders too, where the ſymptoms of debility occur without any internal topical inflammation, veſicatories become a neceſſary remedy, eſpecially if ſtupor and lethargy prevail. But if along with ſuch febrile weakneſs, ſymptoms of the exceſs of irritability ſhould prevail inſtead of the comatoſe affection, the application of a bliſter ſhould be conſidered as a dubious practice. For though it will ſometimes undoubtedly relieve, it will alſo be found to encreaſe the diſeaſe in conſequence of irrita-

* Exanthematic diſorders, when the fever is of the inflammatory kind, are frequently attended with a topical inflammation of ſome internal organ, as the brain, the lungs or abdominal viſcera. This obſervation holds in the eryſipelas, the plague, the ſmall-pox, the meaſles, the miliary and ſcarlet fevers, &c. In all ſuch caſes the application of a bliſter is proper.

tion, which is moſt commonly excited during ſuch a mobile ſtate of the nervous ſyſtem.—If, when the eruption of the meaſles has diſappeared, the inflammatory diſpoſition of the habit ſhould remain, and endanger an inflammation of the lungs, tubercles and conſumption, bliſters are often applied with ſucceſs.—If the miliary eruption ſuddenly retrocede, and the patient immediately find himſelf greatly ſunk and oppreſſed with ſickneſs and anxiety, the operation of a bliſter, provided no particular contraindication occur, will generally be productive of ſalutary effects.—If, in the ſmall-pox, the puſtules, inſtead of being of a good kind, with a proper degree of inflammation and a favourable tendency to ſuppuration, appear ſmall, pale, and depreſſed, the prudent uſe of a bliſter, beſides its action as antiſpaſmodic, excites ſometimes the languid efforts of nature, and produces a happy change in the appearance of the diſeaſe. If the inflammation of the face ariſe not to a proper height, and that of the hands and feet follow not in regular ſucceſſion, but the puſtules on the extremities appear pale and ſhrunk, the application of bliſters to the hands or feet is a practice deſervedly recommended.

With

In Hemorrhages, practitioners have generally been too much afraid of the ſtimulus of cantharides, to have frequent recourſe to bliſtering. Experience however of its utility in topical inflammations, having removed all needleſs ſcruples and timidity concerning its uſe, has encouraged them at laſt to make trial of this remedy in hemorrhages. The experiment has been repeatedly followed with ſucceſs as well in the hemorrhage of the noſe as in the vomiting and ſpitting of blood. In the latter, ſince there always occurs, beſides a topical congeſtion of blood in the part, ſome degree of inflammation, which is liable to form tubercles and to produce an ulceration of the lungs, bliſters are found both ſafe and uſeful, leſſening rather than cauſing irritation *. In uterine floodings the uſe of them is dubious, becauſe,

* "In naſal hæmorrhages, bliſters applied to the back have been ſerviceable; and may we not from analogy conclude that they would be equally uſeful in hæmoptoes?" Percival's Eſſays, vol. I. p. 233.

Dr. Vandouvran, Profeſſor of the Practice of Medicine at Leyden, informed me that he had very often applied bliſters in the naſal hæmorrhage with ſucceſs.—Dr. Cullen from his own experience is clearly of opinion, that they are uſeful in hæmoptoes

becauſe, if ſtrangury be excited, the irritation may be communicated to the womb and encreaſe the hemorrhage.

With reſpect to Chronic Diſorders, I ſhall add a few obſervations upon the practice of bliſtering in the Comatoſe and the Spaſmodic. The apoplexy and palſy frequently ariſe from ſanguine congeſtion in the veſſels of the brain without rupture, or from ſanguine or ſerous effuſion in conſequence of the rupture or dilatation of the veſſels. They may alſo ariſe, or when once induced, ſubſiſt from collapſe and debility of the nervous ſyſtem. Convulſions and epileptic fits often occur from ſimilar cauſes. For ſimilar topical affections or collapſe of the brain, are, when in a certain degree and under peculiar modifications, found in fact capable of creating in prediſpoſed habits, that ſtate of irritability, which is productive of irregular contractions of the muſcles, both of the convulſive and epileptic kind. To diſtinguiſh whether the effuſion and congeſtion in the brain be

hæmoptoes and vomiting of blood as well as in the naſal hemorrhage. — Dr. Gregory formerly maintained the ſame opinion. Bliſters in theſe diſorders determine from the part affected by the evacuation; and evidently prove powerfully antiſpaſmodic.

be ſerous or ſanguine, (a diſtinction ſometimes of the greateſt importance) we muſt have recourſe to the temperament and general ſtate of the ſyſtem. In one caſe, we may diſcover the real ſigns of plethora; in the other, a debilitated phlegmatic habit of body, with the preſence perhaps of ſome evident hydropic ſymptoms.—It is however obſervable, that an encreaſed impetus of circulation in the brain, connected with general plethora of the conſtitution, may create ſerous effuſion by dilatation of the veſſels, which cannot be diſtinguiſhed from ſanguine effuſion. But this latter diſtinction is very immaterial, as plethora is equally prevalent in both, and the method of treatment in every reſpect exactly the ſame.—In all theſe caſes of comatoſe and ſpaſmodic diſorders induced by the cauſes above-mentioned, the application of a bliſter to the head, after neceſſary blood-letting, is an uſeful practice*. When the complaint requires it, the evacuation may for

* Vid. Boerhaave's Aphor. 1025, 1034, 1044, 1069, 1081, 1083, 1084.—Van Swieten Com. in Aphor. ſupradict.

Dr. Cullen and other eminent phyſicians ſtrongly recommend the uſe of bliſters in theſe caſes, even when the diſorders have evidently ariſen from plethora. They are uſeful on the ſame principle as in the inflammation of the brain.

for ſome time be advantageouſly continued. Bliſtering upon the head is particularly adapted to the cure of that ſpecies of the epilepſy, in which there is a local determination of blood to the brain, while the general ſyſtem is under a ſtate of debility.—In the convulſive aſthma *, in the hooping cough, and in the colic, all of which are evidently ſpaſmodic diſorders, veſicatories are applied often with great advantage, a

* Sauvages Noſol. Method. tom. I p. 663. Hora circitur ſecunda matutina, pectus conſtringi, diaphragma ſurſum trahi, rigeſcere videtur, non niſi cum labore deprimitur, aſt multo major eſt difficultas coſtas elevandi pectuſque dilatandi, ad quod concurrere opus eſt muſculos lumborum & ſcapularum; æger e lecto ſurgere cogitur, inſpiratio difficilis eſt, multo magis quam expiratio, quæ adeo lenta & tarda; aſthmaticus vix poteſt tuſſire, expuere, nares emungere, aut loqui; ſtertor vel raucitas in expiratione apparet; alterutri lateri difficilius incumbit, & dein ex eodem pulmonis latere ſputa procedunt; flatulentia ſtomachi creſcit, & inſpirationi partim obſtat; ſi acceſſus ſit intenſus, vomitio bilioſa concurrit; frigida appetuntur; calida ut vinum flatulentiam augent; ſæpius acceſſus invadit vacuo ventriculo poſt catharſim, jejuniumve; ſi vero ſtomacho bene paſto accidat, diutius durat, & intenſior eſt. Aſthmaticus incaleſcit ad ſudorem uſque cum pulſu celeri, licet inæquali; febricula illa a lacte intenditur; ſurgens e lecto alvum pluries dejicit cum flatibus. —In the treatment of the diſorder, the application of bliſters between the ſhoulders and upon the ancles is recommended by Floyer and others.

a fact ſtrongly in favor of their antiſpaſmodic power.

But it is not neceſſary, by way of preventing the abuſe of medicine from the neglect of bliſters, to enumerate every complaint in which this remedy may be ſerviceable. The opinion here embraced of their importance in practice and of their mode of operation, has, it is hoped, been rendered ſufficiently clear. But though much may be urged in favor of bliſters, it is not meant to recommend them on every trivial occaſion. The uſe however of a ſerious remedy is requiſite in a ſerious diſeaſe. One would wiſh likewiſe ſuch a remedy to be employed at that critical period of a complaint, when it will be experienced the moſt efficacious. A needleſs ſeverity of practice is as juſtly to be condemned as a dangerous timidity.

SECTION V.

OF

STIMULANTS.

THIS CLASS of remedies is no leſs extenſive than important. It comprehends in part ſeveral other claſſes, which, though diſtinguiſhed by a peculiar mode of action, are however poſſeſſed of a ſtimulant power. The abuſe of many ſtimulating remedies has been already treated of under the title of ſudorifics, purgatives, emetics, and bliſters. The conſequences of the neglect and imprudent uſe of them have been ſhewn. At preſent, therefore, we ſhall confine ourſelves chiefly to thoſe remedies which may be more eſpecially referred to the head of ſtimulants. We mean however to comprehend under this claſs ſome

few particulars, which indeed may belong more properly to other claſſes, but which, if not here conſidered, muſt have been omitted. It is intended only to ſpeak of thoſe remedies that are in general uſe, and by ſome but imperfectly underſtood. Paſſing by therefore numberleſs ſtimulants, (many of which, though frequently employed, are of little utility) we ſhall advance ſome obſervations on the abuſe of Heat, warm Fomentations, Wine, Volatile Alkali, the Stimulating Regimen, Balſams and Expectorants, ſome general Stimulants, Mercury, and Exerciſe. For in treating ſeparately of theſe articles, it would be an endleſs taſk to trace them through the variety of diſorders in which they may be imprudently employed.

But before I enter into particulars, I ſhall make a few remarks on the general effects of ſtimulants *. Many of them are ſuch remedies as tend to excite the animal energy, and conſequently the action of muſcular fibres. They encreaſe the heat of the body, the circulation of

* Cullen's Inſtitut. of Med. p. 64. "Whatever can excite the contraction of muſcular fibres is called a *ſtimulus*; and in general the means of exciting contraction are called *ſtimulant powers*."

of the blood, the ſtrength and quickneſs of the pulſe. They act in ſupport of the tone of the ſyſtem. They promote ſeveral ſecretions, but particularly the ſecretion of the perſpirable matter, and enable the conſtitution to eliminate from the blood thoſe putreſcent particles, which in many complaints are retained in conſequence of debility and of ſpaſm. The circulation through the brain being more vigorous, the tone of the mind is frequently no leſs ſupported than the tone of the body. The ſpirits are exhilarated, and deſpondency mitigated or happily converted into that inattentive ſtate of mental eaſe, which is found ſo highly conducive to the recovery of health in numberleſs diſorders. Theſe effects may be obtained from ſtimulants, though every ſtimulant is not capable of producing them. We ſhall therefore deſcend to the conſideration of particulars, each of which is poſſeſſed of powers that deſerve attention.

I. We ſhall begin with the article of Heat.

To a certain degree, the ſtimulus of heat is abſolutely requiſite for the ſupport of all animal as well as vegetable life. Without it, no plant, no animal could poſſibly exiſt. The world

world would exhibit but a lifeleſs ſcene. Providence therefore has, with the utmoſt wiſdom, endowed all animal bodies with the power of generating a certain degree of heat. Different degrees are neceſſary for different animals. The heat of the human body is generally about 96 or 98 degrees of Farenheit's Thermometer. It is no greater in the hotteſt than in the coldeſt climates *. For where the atmoſphere is ſo cold as to endanger life, we ſeek, for the purpoſe of preſerving a proper warmth, the aid of various external means, which nature has liberally beſtowed on thoſe nations that are leſs favored with the benign influence of the ſun.

To thoſe external means uſed in cold climates, we may add the greater efficacy of the internal generating power of the conſtitution. Native heat is cloſely connected with the circulation of the blood, though not ſolely dependent upon it. In proportion therefore to the tone of the ſyſtem, to the ſtrength of the nerves, and to the vigorous action of the heart and arteries, the attrition between the ſolids and fluids will be ſtronger, and conſequently the

* Cleghorn on the Diſ. of Minorca.

the native heat of the body better ſupported. In hot climates, the animal fibres are more relaxed, the contractions of the heart and arteries are weaker, and the action and reaction of the ſolids and fluids leſs conſiderable. But where the external atmoſphere is cold, the ſyſtem, in conſequence of the greater vigor of its fibres and of the encreaſed force of circulation, is able more powerfully to generate native warmth. Theſe particulars have great influence in fixing the ſtandard of human heat, and in producing that equality in the temperature of the body, which is obſervable among the inhabitants of the hotteſt and of the coldeſt climates.

But though heat is a ſtimulus, without which there could be no life, yet when applied to exceſs, it is highly deſtructive of health. The too free application of external heat to the body, is a very general and powerful cauſe of diſeaſes.

Exceſs of external heat diminiſhes native heat *. It relaxes and weakens the nervous ſyſtem.

* Pro intenſiore medii ambientis calore, quo, non ſuo, corpus caleſcit, caloris nativi imminutio, extinctio, extranei ſubſtitutio. Gaub. Inſ. Pathol. Med. § 424.

tem. The powers of the mind conſequently become depreſſed, and incapable of being exerted with that eaſe, ſtrength, conſtancy and ſpirit, which are requiſite in the conduct of human affairs. The contractions of the heart and arteries grow more languid, and the circulation, a function of ſuch infinite importance to life, is but imperfectly performed. The tone of the ſtomach and inteſtines is greatly impaired. Appetite, digeſtion and nutrition become defective, which are often ſure ſigns of a premature decay of nature. The ſecretions and excretions are variouſly diſturbed. Some are leſſened, while others are morbidly encreaſed. The ſkin is relaxed; its excretion is often too copious; its tone is greatly diminiſhed. The lungs are particularly injured; becauſe the heat of the atmoſphere in conſequence of inſpiration is moſt extenſively applied to their ſubſtance.—The whole body is at laſt rendered weak, irritable and highly obnoxious to the action of cold, which, in ſpite of every precaution, will frequently impair the health of perſons whoſe conſtitutions are delicate and tender.—To theſe effects we may alſo add, that too great heat, ſuddenly applied, is capable of rarefying the fluids and of producing a temporary plethora of the ſyſtem, which is powerfully ſtimulant,

and

and frequently dangerous, if not fatal in its conſequences *.

Such are the pernicious effects of too much external heat applied to the human body. It

* Aer calidus—corpora calefacit;—particulas, quibus, conſtant, in mutuo cohæſione relaxat;—fermentationem, putredinem, ciet ac promovet.—Ex rarefactione augmentum voluminis, et majus quidem in fluidis, quam in ſolidis; unde plenitudo vaſorum & turgor, & multiplex humorum abberratio.——Ob relaxatam cohæſionem debilitas ſolidorum, ſpongioſus carnium contextus, articulorum infirmitas, laxum, iners, flexile.——Vis vitalis ſenſilior quidem & agilior, at robore, tenacitate, hinc duratione minor, facilius in ſuis motibus turbanda, brevi fervore torpens, deficiens.—Defectus ſubtiliorum, craſſamenti inſpiſſatio, immeabilitas, diatheſis atrabilaria, inflammatoria, ſolidi exſiccatio, vaſculorum obſtructio, &c.—Atque hinc oriundas febres bilioſas, putridas, ardentes, malignas, morboſque acutos, calidos, multivaria functionum generis nervoſi læſione ſtipatos.——Ea, quæ primis viis continentur, ſicubi ad fermentandum aut putreſcendum prona fuerint, æſtuoſo aëre tanto citius in hos motus concitantur, ac ructus, inflationes, dolores, ſpaſmos ventriculi, & inteſtinorum, anxietates, vomitum, choleras, diarrhæas, dyſenterias, &c. producunt.—Manifeſtum eſt calorem vehementer nocere plethoricis, obeſis, bilioſis, calidis, ſiccis, in hæmorrhagias pronis, irritabilibus, cibo animali potuique ſpirituoſo deditis, multiſque cacochymicis; præcipue autem generi nervoſo, pulmonibus, primis viis ac ſyſtemati bilioſo infeſtum eſſe, harumque partium functiones multimodis turbare. Inſt. Pathol. 423, 424, 425.

is of little moment in what manner the application is made, whether by means of fires, ſtoves, baths or clothes. In each of theſe ways it may be rendered deſtructive of health.

To prevent the ill conſequences ariſing from unneceſſary heat, it is of the utmoſt importance to be much expoſed to the cool air; to be cautious in avoiding large fires and hot rooms; to be ſufficiently, but moderately clothed; and to ſleep on a matraſs in a cool ſpacious chamber, and ſo covered as to maintain only a moderate degree of warmth. It is a very general error, to expoſe the human body too much to the action of heat, with a view to preſerve it from the pernicious effects of cold. The influence of cold will be the leaſt conſiderable upon thoſe who are frequently but prudently expoſed to its action, and whoſe conſtitutions are not become weak and irritable from an abſurd exceſs in the application of heat. It is a very general error likewiſe in this country, to lie loaded with bed-cloaths, and conſequently much hotter than is conſiſtent with health. Many are accuſtomed to ſweat in the night, but particularly towards morning, when the heat is moſt copiouſly collected about the body, and the ſkin and exhalant veſſels are relaxed.

relaxed. Such a habit, which is extremely common, is ſingularly detrimental to health, and powerful in producing as well as in ſupporting many chronic diſorders.

We ſhould now have proceeded to point out the pernicious conſequences of heat, as improperly applied in the treatment of diſeaſes, if we had not already ſpoken fully on that ſubject when conſidering the abuſe of ſudorifics. The dangerous effects of the exceſs of heat have been there enumerated. If the reader were not ſtruck with the melancholy ſcene then preſented to his view, it would be in vain to attempt to move him by repetition.

From the flagrant abuſe of heat by perſons in health as well as by thoſe laboring under diſeaſe, what numbers are moſt materially injured in their conſtitutions. From this cauſe, how often do we ſee the tender bud of infancy, inſtead of progreſſively opening and blooming in health towards the perfection of manhood, become pale and withered with diſeaſe. One is at a loſs to comprehend from what motive ſo great a part of mankind are perſuaded to deſtroy their health, by thus acting in defiance of

reaſon and experience. Is it from the influence of opinion, that great diſtinguiſhing mark between the rational and brute creation, but that inexhauſtible ſource of error? Or is it from luxury? Were that an object of importance, it ought conſtantly to be remembered that there can be no true luxury without health. Common ſenſe has long ſince informed us, that even under diſeaſe, we cannot bear too much indulgence with impunity. Heat has frequently been made ſubſervient to the luxuries of mankind; and like moſt other proſtituted bleſſings, has often been induſtriouſly converted into a curſe.

II. Some obſervations ſhall next be advanced on the abuſe of Warm Fomentations, Wine, Volatile Alkali, and the Stimulating Regimen, as uſed in Fevers ſtrictly ſo termed; though they will be found applicable in general to all the eruptive, and many other febrile diſorders.

Warm Fomentations derive their virtue in a great meaſure from their heat, and hence being gently ſtimulant, I have ventured to introduce them here, though I rather conſider their chief action as relaxing and antiſpaſmodic. They are a valuable remedy; but from the

combination

combination of the different powers which they poſſeſs, they are very apt to be miſapplied.

In fevers, when the inflammatory ſtate prevails, with a quick ſtrong pulſe and a conſiderable encreaſe of heat, warm fomentations are often very injudiciouſly preſcribed. They rarefy the fluids, ſtimulate the heart and arteries, and aggravate the ſymptoms of inflammatory fever. In all caſes of topical inflammation ſupervening on a fever, accompanied with plethora and a ſtrong action of the veſſels, warm fomentations are on that account a very dubious remedy. For the ſame reaſon too, they ſhould be cautiouſly employed in the beginning of every fever.

But after the inflammatory ſymptoms, which denote the exceſs of ſtimulant power, are removed either by evacuations or by the duration of the fever, warm fomentations can hardly be improper at any other ſtage of the diſeaſe. They are very ſafely and advantageouſly employed in the comatoſe, the phrenetic, the maniacal * and the low delirium of fevers, when the

* Pringle's Obſervations, p. 135. "And I would likewiſe recommend for the hoſpitals, what I have ſometimes ſince

the ſymptoms of ſtrong reaction are diminiſhed.

Warm fomentations are particularly indicated in caſes of topical determinations to the head and great irritation of the brain and nerves, when at the ſame time the general ſyſtem is under a ſtate of debility. In the advanced ſtage of fevers, attended with a wild aſpect, conſtant watchfulneſs, tremors, ſtarting of the tendons, convulſions, a weak, frequent, irregular and contracted pulſe, &c. fomentations are urgently indicated, and often found of ſingular uſe. They are ſerviceable in removing irritation and all irregular motions of the nerves; in rendering the pulſe more ſlow, regular and full; in procuring ſleep, ſolving ſpaſm, and promoting a favorable degree of perſpiration.

Great caution however is requiſite in regard to the mode of their application; otherwiſe a valuable

ſince in a phrenitis ſucceſsfully uſed in my private practice, a fomentation to the feet and lower part of the legs with double flannels wrung out of water, (with a ſeventh of vinegar) made agreeably warm, and repeated often for an hour or two at a time."

valuable remedy will from negligence be generally experienced ineffectual, if not pernicious. The patient ſhould be moved as little as poſſible, that he may be neither irritated nor fatigued. The greateſt care ſhould be taken to avoid moiſtening the bed-cloaths; becauſe the water generating cold in conſequence of evaporation, would, by checking the diſcharge of the perſpirable matter, add undoubtedly to the danger of the diſeaſe. The temperature of the air in the room ſhould be kept moderately warm, in order to avoid the application of cold to the body during the uſe of the fomentation, which ought to be continued one or two hours to render it efficacious.

Whenever a cordial ſtimulant is indicated in fevers, Wine, made from the juice of the grape, is the ſafeſt and moſt efficacious. When prudently adminiſtered as a remedy, it is frequently productive of the happieſt effects. But as it is a powerful means of cure, the danger of its abuſe is greater. It is not like many other ſtimulants, poſſeſſed of ſuch weak virtues as to render it a matter of indifference, whether it be given with judgment or not. All the good effects in general which have been aſcribed to ſtimulants, are with the

ſtricteſt propriety applicable to this important remedy. Spirits are of a much more inflammatory nature than wine, nor can they be rendered of equal medicinal virtue by any mixture or dilution whatever. When the component parts of wine are thus ſeparated by art, they can never be again united as before. The ſtimulus of wine applied to the ſtomach is ſoon communicated to the brain, the great origin of the nerves. The action of the living ſolids is excited, and the energy both of body and mind is encreaſed.—Yet if taken in too great quantity, wine will undoubtedly operate as ſedative on the nervous ſyſtem. It will debilitate and exhauſt. The ſpirit, obtained from wine by diſtillation, is ſo powerfully ſedative, that it is capable of acting on the brain and nerves as a poiſon, and of inducing collapſe, lethargy, apoplexy and death. But we ſeek not as a remedy in fevers, for the highly ſedative powers of wine. We have occaſion chiefly for its ſtimulant and antiſpaſmodic powers, uſed in ſuch manner as to be rendered moſt beneficial in promoting the recovery of the febrile patient. The practice is intricate, and merits to be diſcuſſed with accuracy.

In

In the beginning of fevers while the inflammatory ſymptoms prevail, as indicated by unnatural heat and great ſtrength and frequency of the pulſe, wine is ſometimes employed, but not without conſiderable danger. It encreaſes by its ſtimulus every ſymptom of the diſeaſe, and endangers topical determination, inflammation, and a numerous train of unhappy conſequences. Whenever a ſymptomatic inflammation is attendant on an inflammatory fever, it is ſcarce neceſſary to obſerve, that wine is extremely pernicious. In the inflammations of the brain, of the lungs, or of the abdominal viſcera, ſupervening on an inflammatory fever, wine is therefore to be cautiouſly avoided.—Or if an increaſed impetus of the blood in the veſſels of the brain occaſion delirium, which is not unfrequent in the inflammatory fever, the uſe of wine is particularly contraindicated, as there is evidently danger of its exciting a phrenſy.

In caſes even of ſymptomatic phrenſy or peripneumony, &c. prevailing towards the decline of fevers, accompanied with irritability and weakneſs, the ſtimulus of wine cannot in

neral be endured with impunity *. Nevertheleſs we often meet with catarrhal affections, complicated with fevers attended with great debility, which fevers admit of ſenſible relief from the proper uſe of wine. In theſe inſtances, however, the inflammation is eryſipelatous, and no general inflammatory ſtate of the ſyſtem is prevalent.

When the fever ariſes from contagion or any other confined noxious effluvia from animal bodies, and is evidently of a nervous malignant ſort, without local inflammation; when the mind is humbled and dejected, the countenance pale and depreſſed, the pulſe quick, weak and irregular; we may ſafely have recourſe, even at the beginning of the diſorder, to the cordial virtue of wine.—If the fever be a ſynochus, we ought to abſtain from the uſe of wine, till the inflammatory ſymptoms be removed and thoſe of debility prevail. We may then prudently

* Speaking of the latter ſtage of the jail fever, Sir John Pringle obſerves, "but if the delirium encreaſed upon uſing wine, if the eyes looked wild, or the voice became quick, there was reaſon to apprehend a phrenitis; and accordingly I have often obſerved, that at ſuch times all internal heating medicines aggravated the ſymptoms, &c." Diſeaſes of the Army, p. 315, 316.

dently endeavor, with this remedy, to ſupport the patient's ſtrength.

Nor does delirium in fevers forbid in every caſe the uſe of wine. Although the phrenetic, in which the brain or its membranes are very apt to be inflamed, is generally encreaſed by the ſtimulus of wine; yet the low and the maniacal deliriums which have been before explained, are frequently abated or removed by its ſtimulant and antiſpaſmodic quality. The low delirium, depending on a collapſe of the brain, without any local affection or inflammatory ſymptoms, ſtrongly indicates the uſe of wine. In the maniacal delirium, its good effects are often very conſiderable in ſuddenly compoſing the anxious mind, tortured with falſe imaginations, and in leſſening the irritation of the nerves that is attendant on debility *. At the ſame time it is extremely important to diſtinguiſh as accurately as poſſible between the maniacal and the phrenetic deliriums; both often occuring, as was obſerved, at the decline of dangerous fevers, in which the contagion is highly ſedative and the nervous energy depreſſed. On this diſtinction the ſuc-

* Gregory's Clinical Lectures.

ceſs of the practice depends.—Whenever ſtupor and lethargic ſymptoms occur in the progreſs of a fever, the effect of a diminution of the nervous influence, without topical inflammation, wine is often preſcribed with ſingular efficacy, raiſing the pulſe and exciting the action of the nervous ſyſtem.

But though there are many caſes of fevers, evidently to be relieved by the ſtimulus of wine, yet every practitioner, even the moſt knowing, will not unfrequently meet with ſuch combinations of febrile ſymptoms as are inductive of doubt. Sometimes it may be dubious whether the inflammatory ſtate be ſo compleatly removed, that the fever may admit ſafely and ſucceſsfully of the uſe of wine. For a premature uſe of the remedy is well known often to diſappoint the practitioner, and to prejudice the patient againſt it.—At other times the ambiguity may depend on the complication of peripneumonic ſymptoms with a contagious fever; and yet wine ſeem ſtrongly indicated by the great proſtration of ſtrength.—Or the ſymptoms of phrenſy, as it frequently happens, may be ſo ambiguous* that the diſtinction

* Dr. Vogel defines the Phreniſmus,—Vera inflammatio cerebri

diſtinction betweeen the phrenetic and the maniacal delirium in fevers ſhall be exceeding difficult, if not impoſſible to be accurately formed.—Yet in all theſe and ſuch like caſes of uncertainty, it is the practice of the ableſt phyſicians to make a cautious trial of the remedy, which, under their prudent directions, may be done always with ſafety, and ſometimes with ſucceſs.

The ſkilful practitioner, in all ſuch critical conjunctures, will firſt examine moſt minutely into the preſent ſtate of the fever, and weigh every circumſtance with attention. He will endeavor to diſtinguiſh accurately between thoſe ſymptoms, which indicate the exceſs of ſtimulant, of ſedative, or of ſeptic powers. With the knowledge of theſe facts, it is eaſy for one of a clear comprehenſive underſtanding, to combine his ideas together, to form juſt compariſons, and to draw from thence rational concluſions. He will be able to judge with much certainty concerning the abſence of thoſe ſymptoms which denote an inflammatory ſtate.

After

cerebri aut membranarum ejus; quam ex dolore capitis & vehementi delirio febrili vulgo definiunt, quæ ſigna vero admodum ambigua. Cullen's Synop. Noſol. Method. p. 145.

After ſuch an examination, he will attentively conſider the cauſes, the nature and the duration of the fever. If it has ariſen from cold, he will clearly perceive that the inflammatory diſpoſition is likely to be more prevalent, than if a ſeptic contagion has operated in debilitating the nervous ſyſtem, and in promoting like a ferment the putreſcency of the fluids.—The ſeaſon of the year and the nature of the epidemic, he will deſervedly regard as objects of attention. For he will remember that heat and moiſture debilitate and favor the putrefactive proceſs; and that concerning the nature of the epidemic, men reaſon with force from analogy ſupported by experience.—The duration of the fever he will conſider as a very important fact in determining his judgment. If the fever be in an advanced ſtage, for inſtance, towards the end of the ſecond or the beginning of the third week, he will in many caſes conclude with much certainty concerning the abſence of the inflammatory ſtate.

He will be mindful diligently to attend to the conſtitution, the habits and the natural cravings of the patient. For if, previous to the invaſion of the fever, he were weak, relaxed, and unaccuſtomed to exerciſe, we have great reaſon

reaſon to expect exceſs of debility. If he were habituated, when in health, to the free uſe of wine, it becomes more particularly indicated in diſeaſe. Cuſtom is the lawleſs tyrant of human nature *. Under her dominion, we inſenſibly degenerate into ſlaves. From her chains, we can ſeldom free ourſelves at once with impunity. The cravings of inſtinctive nature, unbiaſed by opinion, may generally be indulged with ſafety and advantage. If the patient really feels a natural propenſity for wine, wine will very probably be found proper and effective.

The able practitioner, in all ſuch dubious caſes, will be very attentive to the effects of the remedy. If, upon a cautious trial of wine, he obſerve the ſymptoms are not encreaſed, he will be encouraged ſteadily to proceed. If the patient find it agreeable, and feel himſelf refreſhed by its cordial virtue, it is a favorable proof of its efficacy in ſupporting his ſtrength at ſo dangerous and critical a juncture. In con-

* Dr. Cullen, in his Inſtitutions of Medicine, gives a a learned enumeration of thoſe laws which may be eſtabliſhed by cuſtom, and obſerves, that "many of them are with difficulty avoided; that they are often rigidly fixt, have a conſiderable influence on the action of the brain, and govern the revolutions of the animal ſyſtem." p. 91.

conſequence of the remedy, the pulſe becomes fuller and ſtronger, indicating more vigorous contractions of the heart and arteries. If it were previouſly ſlow from collapſe and a comatoſe ſtate of the brain, it is rendered more frequent by the uſe of wine. If it were frequent from weakneſs and irritability, it is rendered ſlower by the ſame means. For wine, where it is employed with judgment and agrees with the patient, either rouſes from ſtupor, or leſſens watchfulneſs, anxiety, delirium, twitching of the tendons, and all the ſymptoms of irritation.

The French wines, on theſe occaſions, are juſtly choſen in preference to thoſe of any other country. The Spaniſh and Portugal wines are generally more adulterated with the admixture of ſpirits, which renders them heating, and therefore leſs adapted to the cure of febrile diſorders. Claret or rheniſh, of a proper age and of a good ſort, are eſteemed the moſt ſerviceable. The quantity to be taken in the ſpace of twenty-four hours, muſt be proportioned not only to the ſymptoms of the diſeaſe, but to the patient's age, ſex, temperament, habits, and conſtitution. If the quantity be too ſmall, the effects will be inconſiderable; if it be too great,

they

they will be pernicious. Any quantity from half a gill to a quart may, when indicated, be taken in a day with the moſt evident relief *. Inſtead of pure wine, it is prudent for the moſt part to uſe it in a diluted ſtate. Wine is often given with propriety in the forms of negus, whey, panado, &c. Negus, in which the wine is mixt with cold water, is frequently the moſt palatable and efficacious form. For cold water is generally admiſſible where wine is indicated. It will improve the tonic virtue of the remedy, and be ſerviceable †, except when a catarrh or

* Pringle's Obſervations, p. 314.

† Greg Elem. of Practice, § 29. It is there recommended to diminiſh the increaſed impetus of the blood, by the proper uſe of ſedatives and the antiphlogiſtic regimen, and among other things by the "proper application of cold, cold air, cold drink, allowing the patient to throw out his limbs, to be lightly clothed, and to ſit out of bed at his pleaſure."—When ſpeaking of the nervous fever, Dr. Gregory, Elem. of Pract. § 86, adviſes the uſe of cold drink to ſupport the patient's ſtrength. — Cleghorn on the Diſeaſes of Minorca, chap. iii. p. 190, obſerves, "that it is a noted queſtion among phyſicians, whether, during the fit, the drink ſhould be warm or cold? The Spaniards generally give crude water, cold from the ciſtern; and we find by experience that this, if it be not haſtily ſwallowed down in great quantities, is not only ſafe and innocent in ſummer fevers,

a peripneumony or ſome other inflammation, is complicated with a fever attended with extreme weakneſs; in which caſe, wine is ſometimes ſucceſsfully employed when cold water cannot be admitted with ſafety.

The Volatile Alkali is deſervedly recommended as uſeful in fevers *. Its tranſitory ſtimulus is found ſafe, and readily diffuſible over the whole ſyſtem. The general obſervations advanced relative to wine, will be ſufficient

vers, but much preferable to warmer liquors, as it quenches thirſt more effectually, ſtrengthens at the ſame time the tone of the veſſels, relaxed and enervated by heat, and preventing the tendency of the blood to a putredinous thinneſs. Hence after each draught the body ſeems to acquire freſh vigor, whereby it is enabled to perform the concoction of the febrile matter, and diſcharge it by the proper emunctories. And therefore they are greatly to be blamed who refuſe their patients ſo powerful and agreeable a remedy, in ſpite of the earneſt call of nature, contrary to the advice of the beſt practitioners. Nevertheleſs, as there is a manifeſt hazard of the blood's being coagulated by the ſudden application of intenſe cold, we muſt beware of giving ice water as the Italians and Sicilians do, unleſs the patient has been accuſtomed to it when in health. And if the bowels are inflamed, the ſafeſt way is to give the drink luke warm, or a very little colder."

* Obſervations on the Diſeaſes of the Army, p. 314.

cient to regulate the uſe of the volatile alkali. Whenever languor and debility are conſiderable, it may be often preſcribed with happy effect. Sir John Pringle and Dr. Monro adviſe us to alternate its uſe with that of wine. The opinion of Dr. Huxham, in regard to its ſeptic power of diſſolving the blood and promoting putreſcency, is unſupported by facts. The volatile alkali is proved to be antiſeptic †. In putrid fevers even, it is employed with undoubted advantage.

The Regimen uſed in fevers is frequently of too Stimulating a nature. While the practice of adminiſtering heating ſudorifics was ſo generally adopted, the abuſe of the Antiphlogiſtic regimen was a neceſſary conſequence. This regimen is underſtood by different phyſicians, to bear a more limited or a more extended ſignification. We mean to comprehend under it, the avoiding in general every unneceſſary ſtimulus, which is capable of giving a hurtful irritation to the ſyſtem. It is of the utmoſt importance in the treatment of fevers, for preventing the ſymptoms that denote the exceſs of ſtimulant power and the preſence of

† Pringle's Appendix on Septics and Antiſeptics, p. 7.

topical determinations. By moderating the reaction, it alſo diminiſhes heat, and preſerves the ſtrength of the body from being needleſsly exhauſted. Whenever there occurs an increaſed action of the heart and arteries, with great heat and a ſtrong hard frequent pulſe, (ſymptoms indicating vigor of the conſtitution) no practice without the antiphlogiſtic regimen can poſſibly be ſucceſsful.

The ſtimulus of external impreſſions is greater in proportion to the pain or uneaſineſs which it occaſions. Whatever gives pain or uneaſineſs ſhould be cautiouſly avoided. For this reaſon, the application of a bliſter during the exceſs of ſtimulant power, is evidently improper. We ought ſteadily to ſhun even all the ſlight cauſes of irritation. The body ſhould be freed from the preſſure of ligatures. There ſhould be no inequalities of the bed to create uneaſineſs.—Too great light or ſound is often ſingularly injurious, eſpecially when the brain is inflamed, or its veſſels too much filled with blood. In ſuch caſes, the arteries and veins of the optic and auditory nerves are apt alſo to be unuſually diſtended. This diſtention increaſes the ſenſibility of thoſe parts. When therefore the brain is topically affected, light and ſound

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are capable of giving a dangerous irritation. It is obſervable, however, that there have been ſeveral inſtances in fevers where the patient has experienced greater irritation from ſilence and darkneſs, than from light and noiſe. In ſuch caſes, ſilence and darkneſs are offenſive and evidently increaſe the delirium; but the gentle impreſſions of light and ſound become a part of the antiphlogiſtic regimen.

All the paſſions of the mind, cloſe attention, and every ſpecies of mental exertion, affect the nervous ſyſtem and give irritation. The mind ſhould be kept as undiſturbed as poſſible, indulged in all its capricious humours, and chagrined by no relation of unhappy events. To acquaint a perſon in a fever with private or public diſtreſſes, but particularly with thoſe in which he himſelf may be nearly concerned, argues either great inhumanity, or an unfortunate inattention.

Both cold and heat, under different circumſtances, act as ſtimulants on the human body. During the acceſſion of a fever, while the patient feels a chillineſs and horror upon him, with an unaccuſtomed ſenſibility to the coolneſs of the air, it is prudent to ſhun expoſure

to

to cold, leſt it increaſe the ſymptoms of the cold fit and the ſpaſmodic conſtriction of the cutaneous veſſels.—When the chilline ſs and horror are abated, and a ſenſe of warmth begins univerſally to prevail, the ſtimulus of external heat is cautiouſly to be avoided. The ſick perſon ſhould be in a ſpacious chamber; and breathe an air which is pure and temperate. When in bed, he ſhould be but lightly covered. It may ſometimes be proper for him to be dreſſed in his uſual manner, to ſit up a-while and occaſionally to lie down as he finds himſelf diſpoſed. He ſhould always be permitted, when in bed, to throw out a hand or arm at pleaſure, which may be done with the greateſt ſafety, and is very efficacious in moderating the heat of the body. The curtains ſhould be open and a free circulation of air promoted. The room ſhould be regularly ventilated by the frequent admiſſion of freſh air, which in numberleſs caſes will be found a very beneficial practice. At the ſame time we may, I think, juſtly condemn that exceſs in the application of cold, which ſome practitioners admire. I confeſs I have never known it ſucceſsful. Prudent men ſeem wiſely to dread it. A moſt accurate and learned phyſician informed

me,

me, that he had often ſeen that practice attended with unhappy conſequences *.

As part of the ſtimulating regimen in fevers, we muſt caution againſt the irritation which is occaſioned by muſcular motion. The ill effects of it will be in proportion to its degree, and to the general debility of the ſyſtem. In fevers, attended with great weakneſs, a recumbent poſture is uſually found preferable to an erect one. Even the act of ſpeaking ſhould be avoided, becauſe it agitates the organs of reſpiration, quickens the circulation and fatigues the patient.

With regard to diet, it may be remarked that the action of digeſtion is always accompanied more or leſs with a ſymptomatic fever, which is greater in proportion to the ſtimulus of the aliment, and to the weakneſs and irritability of the ſyſtem. In every fever, whether increaſed action or debility prevails, ſtimulating aliment will be found generally hurtful. The food ſhould always be choſen ſuitable to the tone

* Dr. Fordyce, Profeſſor of the Practice of Medicine at London.

tone of the digeſtive organs *. Animal food is alkaleſcent, prone to putrefaction, and highly nutritious, in conſequence of which qualities it is ſtimulating and therefore often improper in fevers. We ſhould even avoid in general all kinds of broth, eſpecially thoſe which are ſtrong and nouriſhing †. Vegetables, ſuch as the farinaceous grains and aceſcent fruits, afford the beſt and mildeſt nouriſhment. They obviate the putreſcent tendency of the fluids, and prove the leaſt ſtimulating to the general ſyſtem. They are taken in moderate quantities not only with ſafety, but with advantage. We ſhould make however one exception to this general rule, which is pointed out to us by the inſtinctive cravings of the appetite. Nature is a faithful guide, whenever ſhe condeſcends to give us rules of conduct. Though in fevers ſhe generally loathes animal food, and has the greateſt reliſh for the ſummer fruits, yet on the contrary ſhe ſometimes longs for the firſt and refuſes the latter. Such natural craving of the appetite is often a happy ſymptom of returning health. It denotes the tone of

* Hip. Aphor. 8. Sect 1. Ὁκόταν δὲ ἀκμάζῃ τὸ νόσημα, τότε καὶ τῇ λεπτοτάτῃ διαίτῃ ἀναλκαίου χρέεσθαι.

† Obſervations on the Diſeaſes of the Army, p. 132.

of the digeſtive organs to be then materially changed from that ſtate, in which they were at a more early period of the diſeaſe. Thoſe longings, when directed by the ſure guidance of inſtinct and not ariſing merely from opinion, may not only be ſatisfied with impunity, but ought for the moſt part to be indulged as an admirable means of promoting a more ſpeedy and ſafe recovery. To contradict them, is generally the effect either of ignorance or tyranny.—Wine or any other fermented liquors are evidently to be avoided when a ſtimulus is improper. We need only except thoſe caſes, where long habit has rendered them neceſſary for the ſupport of the conſtitution. In ſuch caſes indeed (when not ſtrongly contraindicated) they ought to be taken, but in leſs quantity than uſual and properly diluted. Aqueous fluids, water alone or impregnated with ſome mild vegetable ſubſtances, are the beſt liquors for the purpoſe of dilution.

I ſhall in the laſt place mention, as an article frequently comprehended under the antiphlogiſtic regimen when conſidered in this extenſive point of view, the exhibition of a gentle emetic to evacuate the crudities and acrid con-

tents of the ſtomach, and of an emollient injection or cooling laxative to obviate coſtiveneſs and open the body. By ſuch means we ſhall effectually preſerve the alimentary canal from a conſiderable irritation, which, if communicated to the general ſyſtem, would be found to increaſe dangerouſly the ſymptoms of the fever.

III. I ſhall next make a few remarks on the abuſe of ſtimulating Balſams and Expectorants in the Diſorders of the Lungs. I refer here in particular to the balſams of capivi and of Peru, to gum ammoniac, ſquills and the volatile alkali, as uſed in the inflammation, ulceration or tubercles of the lungs, and in the catarrh, the humid and the ſpaſmodic aſthma*. The importance

* Sauvages Noſol. Method. tom. I. p. 661. "Eſt chronica, periodica reſpirandi difficultas, aſthmatis præcipuum ſymptoma.—Differt a dyſpnæa, quod iſta continua ſit: ab orthopnæa, quod iſta ſit acutus morbus.—Aſthmatis in genere principium morbificum et proximum eſt obex periodicé recurrens pulmonum alternæ dilatationi et conſtrictioni oppoſitus, circulationi vero ſanguinis vix noxius; hunc obicem natura fortioribus reſpirandi conatibus removere, corrigere; ſputum ſæpe viſcidum tuſſis interventu expectorare contendens paroxyſmos efficit; principii morbifici; et conatuum eorum naturæ concurſus cauſam morbi conſtituit; cum conatus naturæ pa-

portance of thoſe remedies in ſuch complaints is ſeldom conſiderable; but the abuſe of them has been ſingularly prejudicial to the inhabitants of this iſland. The nature, cauſes, complication and diſtinction of thoſe diſorders, are ſubjects well deſerving the cloſeſt attention. From ignorance in ſuch particulars, ariſe thoſe groſs miſtakes in practice, to which it is here alluded.

The balſams, gum ammoniac and the volatile alkaline ſalt, are too ſtimulating to be generally employed with ſafety in the inflammation, ulceration or tubercles of the lungs, in the catarrh or the ſpaſmodic aſthma. The ſquills are not ſo heating, and therefore are leſs liable to objections; but they are nauſeous, and can ſeldom be taken in ſufficient doſes to produce any conſiderable effect. To order them in the place of an emetic, is injudicious, becauſe we are poſſeſſed of other remedies which are better fitted to anſwer that intention. I have frequently obſerved that a nauſea induced, and

 improperly

pacati vel interpolati ſunt, nec ita vehementes ut virium vitalium magna jactura ac diverſio ſubſequatur, morbus diuturnus eſſe poteſt, non vero acutus; morbus vero diuturnus eſt potius quam chronicus aſthma, cum in genere vix vitæ periculum portendat, ſaltem aſthma vulgare quod ut plurimum cum ægro conſeneſcit."

improperly continued by the uſe of ſquills, has greatly haraſſed and injured patients of weak and irritable conſtitutions.

Stimulating expectorants tend dangerouſly to encreaſe inflammation of the lungs, to induce ulceration, and to aggravate all the ſymptoms of hectic fever. They are alſo particularly pernicious in the ſpaſmodic aſthma, when connected with plethora.—The humid aſthma is the only diſeaſe, in which at any period the moſt eligible of ſuch expectorants may in general be ſafely admitted.—In the catarrh, much caution and judgment is required to regulate their uſe in practice. For when ſymptoms of peripneumonic inflammation are complicated with the catarrh, thoſe medicines are more or leſs improper in proportion to the degree of their ſtimulus. But when the catarrh is perfectly pure, or only complicated with the humid aſthma, they may be ſafely employed. At the decline of the peripneumony, when all the inflammatory ſymptoms are removed, and the lungs are obſtructed with phlegm, they are prudently recommended.—They are uſeful alſo at the decline of the ſpaſmodic aſthma, when we are anxious to promote expectoration.—But

all

all heating expectorants in general, and particularly the balſams, are of pernicious effect in tubercles of the lungs or in pulmonary conſumption; in which complaints they have been frequently employed and miſerably abuſed.—Whenever a ſtimulant of this kind is indicated in any of thoſe diſorders, ſquills and the volatile alkali are the ſafeſt and moſt eligible. The gum ammoniac likewiſe is eſteemed by ſome. The ſtimulating balſams are for the moſt part too heating to be ſafely admitted into general practice *.

IV. We now proceed to conſider the abuſe of thoſe Remedies, to which by medical writers the term Stimulant is more particularly appropriated †, ſome of which indeed have already been the ſubjects of our obſervations. Under this

* Obſ. on the Diſ. of the Army, p. 166. note *. "Having ſince a former edition of this work, been ſo often diſappointed in the effects of ſuch balſams in this diſtemper, *(viz. the pulmonary conſumption)* I have laid them all aſide, and truſt chiefly to ſmall but repeated bleedings, (when the patient can bear the loſs of blood) to a total vegetable or milk diet, to a ſeton in the affected ſide, to country air and riding, and to the free uſe of acids, when they complain of thirſt and hectic heats.

† Vid. Home's Meth. Mat. Med.

this claſs is generally comprehended cinnamon, cloves, ginger, peppermint, muſtard, horſe-raddiſh, the balſams and the turpentines, guaiac, ſaſſafras, ſarſaparilla, canella alba, the volatile alkali, ſnake-root, wine and other generous fermented liquors, &c. I ſhall not enter here into a detail concerning the uſes and abuſes of each particular ſtimulant, (which would be almoſt an endleſs taſk) but content myſelf with making ſome general remarks on a few individuals.

I have before mentioned the ill effects of the abuſe of ſtimulants, when uſed as ſudorifics in intermitting and continued fevers, in topical inflammations, in eruptive diſorders, &c. Thoſe remedies likewiſe, when not given with the view to promote ſweating, but ſtrictly employed as ſtimulants, are greatly abuſed in the ſame claſs of feveriſh complaints *. Relative therefore to febrile diſorders, I ſhall only add a few obſervations on the abuſe of ſnake-root in fevers, — and of wine, the volatile alkali, and other ſtimulants in the gout.

The

* "It hath been the practice with this view, to give the ſpices and other ſuch ſtimulants; but as they generally quicken the pulſe, and greatly encreaſe the ſymptoms of irritability, I think they ought to be laid aſide." Fordyce's Elem. of Practice, p. 150.

The Snake-root, like many other remedies, might, without the leaſt detriment to the art of medicine, be expunged out of the diſpenſatory. It is poſſeſſed of a dangerous ſtimulus, and is given in general with much freedom. Though the utility of the remedy is ſeldom evident, and not to be obtained without that nice diſcriminating judgment which alone can render it ſafe, yet the ill effects conſequent on its imprudent uſe are really material. They may eaſily be aſcertained from what has been already advanced on the abuſe of wine. But to ſave my reader and myſelf ſuch unneceſſary trouble, I will venture to affirm, that wherever this ſtimulant may ſeem properly indicated in fevers, other ſtimulants, ſafer and more efficacious, may always be ſubſtituted in its place *.

In the gout, the abuſe of ſtimulants is great. The gout is a diſeaſe which, from the uncommon variety of its appearances in almoſt every part of the human body, requires the moſt accurate judgment

* Cullen's Lectures on the Mat. Med. "Though I have often ſeen good effects from this medicine, yet, as they are always very doubtful, as malignancy ſeldom occurs here, and as I can obtain its good effects from medicines of a leſs inflammatory nature, and which I can exhibit with greater ſafety, I have now laid it entirely aſide."

judgment to practiſe in it with ſafety and ſucceſs. This aſſertion cannot but appear ſelf-evident to every one who is acquainted with the hiſtories of the irregular gout, and remembers that it is a diſorder capable of producing confuſion of thought, loſs of memory, vertigo, apoplexy, palſy, aſthma, dropſy of the breaſt, hypochondriac affections, ſpaſmodic pains of the ſtomach and bowels, and topical inflammations of every internal organ. In this Proteus of diſorders, a miſtake in practice, though ſeemingly ſlight, ſhall often prove fatal in its conſequences.

In the regular inflammatory gout, ſtimulants, except ſometimes when previouſly rendered habitual, are always to be avoided. When improperly employed, they will be found more or leſs pernicious in proportion to the degree of their ſtimulus, to the violence of the diſeaſe, to the youth, vigor and irritability of the conſtitution.

In the miſplaced and retroceding gouts *, where

* Dr. Cullen calls that ſpecies of the gout *miſplaced*, in which the inflammation, without having been previouſly ſixt on an extremity, ſeizes ſome internal organ. The *retro-*

where the inflammation is fixed upon an internal part, as the brain, the lungs, or ſome of the abdominal viſcera, the uſe of ſtimulants is attended with the greateſt danger. It produces irritation, increaſes inflammation, and promotes ſuppuration or gangrene. Yet, without the moſt accurate diſcernment, the topical inflammation of ſeveral of thoſe organs is ſometimes diſtinguiſhed with difficulty from the ſpaſmodic affection. In both there is a violent pain of the diſeaſed part, and its function is materially impaired. Great anxiety too, a pulſe more frequent than natural, and ſeveral other ſymptoms of a fever, will be often attendant on ſpaſm, as well as conſtant in inflammation. But though the diſtinction is in ſome inſtances nice and intricate, eſpecially at the firſt attack of an internal organ, yet the method of treatment in thoſe anomalous ſpecies of gout is diametrically oppoſite. For in caſes where violent ſpaſm occurs without inflammation, ſtrong ſtimulants are often indicated, as well to preſerve life as to remove a dangerous exceſs of pain. Stimulating aromatics, volatile alkaline ſalts, wine or even ſpirits may be requi-

retroceding gout is where an internal part is affected, when the inflammation has been previouſly fixt on an extreme part.

red*. But thoſe remedies, if imprudently preſcribed in the local inflammation of an internal organ, are poſſeſſed of a ſtimulus capable of producing the moſt unhappy effects. In ſuch caſes, evacuations, particularly by bleeding, are neceſſary to the cure†; tho', where debility and ſpaſm without inflammation conſtitute the principal part of the diſeaſe, they are often highly dangerous, if not fatal. But if the management of thoſe ſpecies of the gout, when diſtinct, be ſo extremely difficult; how much greater will be the difficulty of treating them when they are complicated together? — I would further mention the abuſe of ſtimulants, whether refrigerant, ſedative, antiſpaſmodic, rubefacient or cauſtic, as topically applied in the regular gout to the affected part. They have all been uſed in this caſe, and ſometimes with ſucceſs; but they have often been productive of internal affections, attended with the moſt alarming ſymptoms. Not only the ſtronger ſtimulants have cauſed ſuch unhappy effects, but, as was before hinted, the ſtimulus even of the topical application of warm water.

It

* Gregory's Elem. of the Practice, §. 404.

† Ibid. §. 404.

It remains to ſay a few words on the abuſe of ſtimulants in the Apoplexy, the Palſy, Convulſions, Epilepſy, and in Weakneſſes of the ſtomach, Hypochondriac Affections, Hyſteric Fits and ſome other chronic Complaints.

It has been obſerved that the apoplexy may ariſe from a collapſe of the nervous ſyſtem, or from a ſerous hydropic effuſion, or an effuſion of blood from the veſſels of the brain or its membranes. In the two firſt caſes, ſtimulants may be ſafely admitted. In the laſt, they cannot be employed without the greateſt danger; for they accelerate the motion of the blood and increaſe the cauſe of the diſeaſe. The indiſcriminate uſe of ſtimulating applications to the noſtrils in the apoplectic fit, ought to be oppoſed and exploded. Even the ſpirit of hartſhorn is capable of exciting a very pernicious effect. What indeed can be more abſurd, than to ſtimulate the olfactory nerves and to increaſe that determination of blood to the brain which is already ſo morbidly great as nearly to have put a final period to life?—In the palſy too, when it is the conſequence of the ſanguineous apoplexy, or induced by a ſimilar though a ſlighter cauſe, the practice of adminiſtering

ſtimulants is unwarrantable and unſucceſsful. But when palſy ariſes from ſerous effuſion unconnected with plethora, or ſubſiſts from mere debility and a diminution of the nervous energy, the neglect of ſtimulants may juſtly be deemed an abuſe of medicine. — The ſame obſervations may be applied to epileptic and convulſive diſeaſes, where the abuſe of ſtimulants is equally as frequent and abſurd. For when general plethora is attendant, or when there is a topical turgeſcence in the veſſels of the brain accompanied with debility of the general ſyſtem, the uſe of ſtimulants is highly dangerous and improper.—In weakneſſes of the ſtomach, hypochondriac affections, hyſteric fits and many other chronic complaints in which debility for the moſt part prevails, ſtimulants may commonly be preſcribed with ſafety and advantage. But if in any of thoſe diſorders plethora ſhould be preſent, (which is no unfrequent occurrence) they are capable of giving a dangerous irritation both to the nervous and vaſcular ſyſtem.

With regard to the general abuſe of ſuch ſtimulating remedies, one remark may be made, that, whenever they are indicated, the uſe of them ſhould not be continued too long toge-

together, but cautiouſly interrupted by frequent intermiſſions. The obſervance of this rule is highly important in the treatment of chronic diſorders. For if ſtimulants be too long employed without intermiſſion, they will not only loſe their efficacy when preſcribed in a common doſe, but, by conſtantly ſupporting an unnatural excitement, tend powerfully to wear out the tone of the ſyſtem, and to augment that very weakneſs, which the prudent uſe of them would moſt undoubtedly have contributed to remove.

V. We ſhall conſider next the abuſe of Mercury in Cutaneous and Venereal Diſeaſes; tho' the obſervations here made will be particularly applicable to the latter. Mercury is a powerful ſtimulant to the human body. We are ſcarcely poſſeſſed of another, whoſe action is equally univerſal. It can be made to operate as emetic, purgative, diuretic, or ſudorific. It is found alſo to have a peculiar tendency to act on the ſalivary glands and to increaſe their ſecretion. Practitioners have attempted differently to explain this fact on chymical or mechanical principles, but upon the whole with very little ſucceſs. Several of their theories indeed ſeem ingenious, but none of them are ſtamped with the laſting impreſſion of truth.

Mer-

Mercury is a remedy of the greateſt utility. The abuſe of it therefore is a ſubject of importance. A great part of mankind in the preſent age owe their lives to its virtue. Yet it ſeems very paradoxical to affirm, (though the fact is ſtrictly true) that conſidering the late period at which mercury began to be in general uſe, no animal, vegetable, or mineral ſubſtance in the world has made greater deſtruction of human health *. For though we have a venereal diſeaſe, that contributes largely to deſtroy numbers of the beſt conſtitutions in this iſland, we have alſo a Mercurial Diſeaſe, which, in cloſe alliance with the former, makes its attack along with it, and indeed with lamentable ſucceſs. It is not meant to inculcate that mercury, as ſome have imagined, leaves any peculiar taint in the blood; but that, as a ſtimulant and an evacuant, it has, eſpecially when imprudently employed, a powerful effect in reducing the vigor of conſtitutions, however ſtrongly founded in reſpect to the original ſtamina of life. Chronic Weakneſs is the mercurial diſeaſe which is here alluded to; a diſeaſe very frequent in the preſent age.

Nu-

* Duncan's Obſervations on Mercury, p. 2.

Numerous indeed are the ſources of the abuſe of mercury. It is often employed without neceſſity. When neceſſary, the uſe of it is ſometimes abſurdly continued too long, and ſometimes injudiciouſly intermitted before a perfect cure be obtained. In this laſt inſtance, the patient after a ſhort time finds his diſeaſe returning upon him. The partial cure before made is entirely loſt by the intermiſſion of the remedy. Its effects remain only as denoting an injury done to the conſtitution. The patient therefore is again put on another mercurial courſe, as defective perhaps as the former. By this means the tone of the whole ſyſtem is moſt unhappily deſtroyed, but eſpecially the tone of the ſtomach and bowels. The relaxation and irritability of thoſe organs is often ſo great, that the ſmalleſt quantity of mercury introduced into the ſyſtem, excites purging and runs off by the alimentary canal. This accident embarraſſes and retards the cure, beſides rendering it uncertain. It is particularly liable to occur when the buſy practitioner has frequent recourſe to the uſe of active purgatives, which in this diſeaſe are not in general neceſſary to the cure, though often employed and greatly abuſed.

In other cafes, we find that, inſtead of the milder preparations of mercury, the moſt acrid ones are choſen, when even the condition of the patient evidently contraindicated their uſe. I am a ſtrong advocate in favor of the mercurial unction, which, properly managed, is found to be one of the ſafeſt medicines for curing the venereal diſorder *. It may with propriety be ſometimes aided, eſpecially in robuſt conſtitutions, by the internal uſe of mercury, ſimply divided by trituration †. It is objected againſt thoſe two forms of uſing mercury, that a ſalivation is more apt to occur than when the acrid preparations are given. But this inconvenience may be avoided by a cautious uſe of the medicine and a ſlow introduction of it into the ſyſtem.—Of the acrid preparations, the calcined mercury, calomel ‡ and the corroſive ſublimate, are the moſt frequently employed. The two firſt are very certain in their effects; the laſt

* Fordyce's Elem. of Practice, p. 361, 364. The Unction is generally employed at St. Thomas's Hoſpital; and Dr. Huck obſerved to me, that he found it one of the moſt uſeful and efficacious preparations of Mercury.

† Obſer. on Mercury, p. 128.

‡ Ibid. p. 135.

laſt, when ſucceſsful, operates more quickly in performing a cure, but is leſs to be depended upon *.—Mercury taken by the mouth is more apt to injure the tone of the ſtomach and inteſtines, which, in the treatment of this as well as of every other diſorder, ſhould always be conſidered as a moſt ſerious object of attention †. From miſtaken notions in this particular ariſe all thoſe ſymptoms of indigeſtion and weakneſs of the alimentary tube, which I have had but too frequent occaſion to mention.

It was formerly thought neceſſary to excite a ſalivation in order to perfect the cure of the venereal diſeaſe. This error was as pernicious as univerſal. We now indeed know a different and a better mode of practice, yet nothing is more common than to find ſome, who, as they have little notion of preſerving a conſtitution while they are curing a diſeaſe, ſalivate the patient without neceſſity. This antiquated practice is at preſent favored only by a few, who are perhaps raſh by nature, or whom age has rendered obſtinate and deaf to every improvement in their art.

* Fordyce's Elem. of Practice, p. 362.

† Obſerv. on Merc. p. 126.

It is enough to accumulate in the ſyſtem as much mercury as will give the ſenſation of an unuſual taſte in the mouth, or ſlightly affect with ſoreneſs the gums or ſalivary glands. This is a ſufficient criterion in moſt caſes of its ſucceſsful operation. The practitioner ſhould even be cautious not to create too great inflammation in the mouth, as it gives pain and proves very diſagreeable to the patient without facilitating the cure of the diſeaſe. It is only requiſite to excite a ſalivation in thoſe caſes, where a ſufficient quantity of mercury cannot be introduced into the body without that inconvenience. In other caſes, it retards the cure, and cauſes a needleſs waſte of fluids *. We ought to begin with a ſmall quantity of mercury, and gradually to increaſe the doſe, till we have accumulated in the conſtitution as much of the medicine as the patient can bear eaſily without ſalivation. In proportion to the larger quantity of mercury which can be retained in the ſyſtem without paſſing off by the inteſtines or ſalivary glands, the diſorder, if other circumſtances are equal, will be removed in a ſhorter time, and with greater eaſe. A courſe of mercury continued

* Obſerv. on Merc. p. 51.

tinued about four or five weeks, excluſive of two or three of the firſt days, and without any conſiderable interruption, will in a recent caſe be generally found ſufficient to make a perfect cure. If the complaint be of a long ſtanding, a more continued uſe of the remedy may be found requiſite completely to deſtroy the contagion. It is not neceſſary in general to confine the patient to his chamber, nor even to prevent him from going abroad and having the benefit of moderate exerciſe *. Nor is it proper to excite ſweating by the addition of the ſtimulus of heat to that of mercury. All the ill effects of heat and ſudorifics, which have been before enumerated, will follow from this abuſe. We ought, however, during the operation of mercury to avoid any unuſual application of cold; becauſe it is apt to determine the blood from the ſurface, and to occaſion a diarrhæa or ſpitting. But it is prudent to maintain only a moderate degree of warmth, ſo as gently to favor inſenſible perſpiration without injuring the conſtitution †.

VI. We

* Obſerv. on Merc. p. 174. † Ibid. p. 171, 172.

VI. We come now to the Abuſe and Neglect of Exerciſe, which is the laſt ſtimulant I ſhall take occaſion to mention. But though it be a ſtimulant, it is widely different from every other ſtimulant in its effects on the human body, whether we conſider thoſe effects as produced on the ſimple ſolids, the moving powers, the motion or quality of the fluids.

Exerciſe increaſes the flexibility of animal fibres; for flexibility in all bodies is increaſed by flexion. It gives greater firmneſs to the ſolid matter of the body. The nutritious fluid, as applied for the purpoſe of nutrition, will, in conſequence of its thinner parts being ſeparated by muſcular motion, become neceſſarily more condenſed. Exerciſe, by increaſing the action of the ſolids upon the fluids, tends powerfully to give ſuch condenſation to the body. The cellular membrane, a ſubſtance of ſo nice a texture, but of ſuch immenſe extent and importance in the human œconomy, will doubtleſs be rendered much firmer by muſcular motion *.—The tone and vigor of the moving fibres are increaſed by exerciſe. The nervous energy becomes greater. Habit is power-

* Cullen's Inſt. of Med. § 23.

powerful in giving ſtrength and facility of motion *.—The circulation of the blood, in conſequence of the action of the muſcles and the preſſure made on the arteries and the veins, is evidently accelerated; and along with the circulation, the motion of the lymph in the lymphatic ſyſtem. But the effect of this preſſure is moſt evident on thoſe veins which are furniſhed with valves †. It quickens the motion of the blood in its return to the right auricle of the heart; and of the lymph and chyle in its paſſage through the lymphatic and lacteal veſſels into the ſubclavian vein, in order to be intimately mixed with the blood and perfectly aſſimilated to its nature. The contractions of the heart and arteries neceſſarily become ſtronger and more frequent, which, with the conſequent increaſed force of reſpiration, accelerate alſo the pulmonary circulation. This greater impetus of the blood through the whole ſyſtem cauſes moſt effectually a determination to the ſurface, and produces a free ſalutary diſcharge of

* Inſt. of Medicine, § 114. "Within certain bounds, with reſpect to force, frequency and duration, the contraction of muſcles, by being repeated, is performed with more facility and force."

† Haller's Primæ Lineæ, § 63.

of the perſpirable matter.—By exerciſe too, ſleep is procured, the appetite is increaſed, the tone of the ſtomach is preſerved, and digeſtion admirably promoted. The blood is determined from the internal viſcera of the breaſt and abdomen, which tends to prevent as well as to remove any obſtruction and unnatural enlargement of thoſe organs.—The generating powers of heat acting more vigorouſly in conſequence of muſcular motion, increaſe the native heat of the body. This effect of exerciſe may in ſome meaſure be dependent on the greater vigor of the circulation and elaſticity of the ſolids.—Exerciſe too is powerful in obviating the plethoric fulneſs of the ſyſtem, and preventing the dangerous conſequences which ariſe from exceſs of blood. For plethora is an unnatural load to the body, which tends conſtantly to exhauſt and deſtroy it. The abſorption of the animal oil is conſiderably promoted, and corpulency and fatneſs effectually prevented. A ſtate of great corpulency is very unfavorable to health. There is ſcarce any other ſtate which diſpoſes the conſtitution to be more frequently or more ſeverely afflicted with diſeaſes *.

Theſe

* Cullen's Lectures on the Inſt. of Medicine.—Vid. Gaub. Inſt. Pathol. § 502, 503, 504, 505, 506, 507, 508.

Theſe are a few of the principal ſalutary effects of moderate exerciſe on the human conſtitution. — Walking is admirably fitted for producing every beneficial change in the œconomy which has been enumerated. It is a natural and wholeſome exerciſe †.—But where the conſtitution is ſo much debilitated as to be unable to bear walking without too great fatigue, or where the peculiar nature of a diſeaſe renders it leſs proper, ſailing or travelling in a carriage may often be ſubſtituted in its place with advantage. Theſe exerciſes are well adapted to caſes of great weakneſs. They evidently create appetite, accelerate the circulation of the blood, determine to the ſurface, and promote perſpiration. But where the ſyſtem is vigorous, they are generally found, when uſed as a remedy, to be inſufficient either for reſtoring or preſerving health. Exerciſe in a phaeton, or in any other carriage where the patient drives himſelf, is, in all complaints in which the mind is dejected and apprehenſive, particularly proper, becauſe the attention is ſomewhat engaged, and there is leſs

† Walking determines the blood in particular to the lower extremities, which in ſome diſeaſes is productive of ſalutary conſequences.

leſs opportunity of making the malady the ſubject of meditation.—Exerciſe on horſeback, which is accompanied with conſiderable muſcular motion, is extremely beneficial, and, where it can be uſed, far ſuperior to the two laſt mentioned ſpecies, for the purpoſe of giving vigor to the conſtitution. It is well fitted both for the preſervation of health and for the removal of many chronic diſorders, eſpecially of thoſe that are attended with a general weakneſs of the body and the hypocondriac affection. For the patient, from his dejection of ſpirits, is apt in theſe complaints to fall into a ſtate of inactivity, which is the moſt certain method of continuing and increaſing them. But the good effects of every different kind of exerciſe are in all caſes the moſt evident, when the exerciſe is purſued with alacrity and pleaſure. It is a happy circumſtance in life, that exerciſe is often neceſſary to the performance of buſineſs, in which it nearly concerns us to be active. Thoſe exerciſes, whether attendant on buſineſs or amuſement, are the moſt ſalutary, which are moderate but ſufficiently continued; and during the courſe of which, the perſon is in natural wholeſome poſtures and breathes a cool pure air. When a patient, of a weak conſtitution, has been accuſtomed

cuſtomed for ſome time to gentle exerciſes, he ſhould, as he gains ſtrength, proceed gradually to make uſe of thoſe in which greater muſcular motion is required *. From the neglect of this caution, many continue in a ſtate of weakneſs, which, without much difficulty, might at firſt have been eaſily removed †. Numbers, conſcious of a ſenſe of debility, refrain imprudently from thoſe exerciſes, which would tend moſt ſucceſsfully to reſtore them to a ſtate of health.

At the ſame time it well deſerves remark, that exceſs of muſcular motion is very pernicious to the conſtitution. The laborious part of mankind are very apt to run into this error, either from their imprudence, or from the nature of their occupations. Exceſſive labor debilitates and exhauſts the ſyſtem. In conſequence of the rarefaction and increaſed force of the fluids, it is capable of inducing (eſpecially if any part of the body be weaker than natural)

* Vid. Boerhaave's Aphor. 28; and Van Swieten's Com.

† When a perſon firſt begins to uſe exerciſe, he finds himſelf ſometimes fatigued and diſordered; but by perſevering in the uſe of it, ſuch effects ſoon diſappear as the conſtitution recovers its ſtrength and tone.

extravaſation of blood, inflammation, rupture of veſſels, hemorrhages and numberleſs other complaints. It excites an unnatural degree of heat, and cauſes an evacuation of too large a quantity of the fluids, particularly of the ſerous kind. It vitiates the nature and qualities of the blood, and greatly diſturbs the different ſecretions. The fat is quickly abſorbed and expelled from the body, which therefore appears emaciated. The nutritious fluid is too much waſted, and not properly applied for the nutrition of the ſimple ſolids. Hence a defect in the proceſs of nutrition.—Exceſs of muſcular motion is alſo very apt to give a morbid rigidity to the animal fibres, and to bring on prematurely the effects of old age. It is indeed an obſervation well founded in fact, that people who uſe hard labor, eſpecially in their youth, ſhorten conſiderably their days, and end them at a period of time, which, with moderate labor, they might in all probability have long ſurvived in health *.

But that error from the exceſs of muſcular motion is frequently the effect of neceſſity or ignorance. The error of conduct is not leſs injurious

* Vid. Gaub. Inſt. Pathol. § 509, 510, 511, 512.

jurious to health, which ariſes from the neglect of that ſalutary degree of exerciſe or gentle labor, which the laws of the human œconomy have rendered indiſpenſable for preſerving it in a ſtate of vigor. An undoubted fact it is, that, from the neglect of exerciſe, the tone and ſtrength of the whole machine is deſtroyed and a morbid irritability is induced, with all the unhappy train of ſymptoms which accompany chronic weakneſs. The tone of the ſtomach and bowels is particularly injured, the appetite is impaired, and the proper ſecretion of the bile and other digeſtive fluids is impeded. From this cauſe ariſe various diſorders of the ſtomach and inteſtines, with a defect of nutrition. The ſolids become weak and relaxed. The action of the heart and arteries, and the circulation of the blood grow languid and imperfect. The ſecretions and excretions are diminiſhed. Plethora and corpulency ſometimes occur, which are not unfrequently followed with a diminution of the nervous energy, a general relaxation of the body, and an unhappy train of conſequent affections. Of all the glandular bodies, the liver and ſpleen are the moſt ſubject to obſtructions from the neglect of muſcular motion. In a word, the want of exer-

ciſe is followed with the reverſe of all thoſe ſalutary effects, which are ſo juſtly aſcribed to moderate exerciſe *. Hence men often render themſelves

* Haud lætior eſt illorum ſanitas, qui in oppoſito errore verſantur. Nimia quies & potentias motrices, &, quæ movendæ ſunt, partes in torporem conjicit. Vis muſculoſa deſuetudine contractionis, congeſto pingui, languore influxus vitalis, minuitur, ſuffocatur; articuli, rigeſcentibus per otium ligamentis, axungia coeunte (222), aptitudinem ad motum amittunt; antagoniſtæ magis renituntur. Ita neglectus animalis motus demum impotentiam parit.

Plus tamen damni et humorum circuitus ob hanc cauſam patitur; ut qui ſolis commiſſus vitæ viribus, extraneis deſtitutus ſuppetiis, (507) per vaſcula minora primum, dein per univerſum ſyſtema langueſcit: Unde humorum ſtagnatio, accumulatio, inviſcatio, caloris nativi imminutio, ſecretionum ac excretionum impedimenta, & quæ ex his oriuntur, mala quam plurima. Ex hoc fonte igitur polychymia (385), plethora (387, obeſitas (394), profluunt, quæ ſarcinis corpus gravant firmarum partium mole ac vi majoribus. Plenitudini cito ſuccedit cacochymia iners, glutinoſa (283), aquoſa (287), frigida, univerſum corpus inundans, qua laxum, molle, flexile (160, 162), ſolidis inducitur, vis vitalis torpet (196, 198), vigor nerveus perit, colluvies feroſa, leucophlegmatia, hydrops varius, pigritia ad motus, ſenſuum hebetatio, ἀναισθησια, omnium functionum ſuffocatio tandem naſcitur.

Præ ceteris peſſime afficiuntur, quæ abdomine continentur, organa primæ digeſtionis; maxime ſi etiam prono corpore ſedenti comprimantur, atque alimenti copia & qualitas haud reſpondeat vitæ deſidi. Namque reſpiratione vegeta, motu externo,

themſelves unfit for truly enjoying thoſe pleaſures of life, by which the Author of nature intended to promote their happineſs, and to excite them to induſtry and activity. They alſo make themſelves diſqualified to act vigorouſly and ſucceſsfully in their reſpective ſtations of life, in which it was even their duty to have been more prudently attentive to the preſervation of their health. They not only injure themſelves, but unhappily entail on their poſterity the ſad effects of their indolence. But if men will not be active to preſerve their own health and do juſtice

externo, ſuccuſſione, non adjuta in opere ſuo tardant, alimentum imperfecte coquunt, lente propellunt, mora longiore corrumpi ſinunt, utile haud ſatis emulgent, nec depurant, fæces accumulant: Unde omne genus vitiorum chyli (323 ad 332), ructus, flatus, ſpaſmus, anxietas, alvus tarda & tumens, anorexia, univerſæ officinæ infirmatio, menſtruorum inertia, degeneratio varia, meſenterii vaſculorum obſtructio, aliaque innumera mala naſcuntur. Ingens præterea ſuccorum multitudo, qua viſcera illa perfunduntur, ſolis eorum viribus, extranea ope deſtitutis, haud ſatis promoveri poteſt: languet ergo circuitus; fit humorum congeſtio, ſtagnatio; ſanguis tarde redux, rarius pulmonum aëre animatus, nec vigore cordis incitatus, in vappam abit, infarcit venæ portarum ſyſtema, ſplenem, hepar, cetera. Nec mirum adeo bilem denique vitiari, (372) cacochymiam, ſcorbutum, cachexiam, icterum, hydropem, malum hypochondriacum, & alios id genus morbos inde produci. Gaub. Pathol. Inſtit. § 513, 514, 515.

juſtice to themſelves, it will be in vain to attempt to convince them of their error, by reminding them of the injuries done to their poſterity. The neglect of exerciſe is particularly hurtful to children; in conſequence of which the tone and vigor of their conſtitutions is often miſerably deſtroyed. Often too women at the moſt critical periods of their lives, from certain erroneous notions which they have ignorantly embraced, injure materially their health by leading too ſedentary a life. By this means they render that weakneſs real and great, which before was in fact much leſs than it appeared to the patient through the deceitful medium of the imagination.

The exerciſe of the mind ought not to be neglected. From want of culture, the mind loſes its tone and energy. By exerciſe, it becomes ſtronger, more active and clearer in its judgments. The moderate uſe of our mental faculties not only heightens their own powers, but has alſo a very ſalutary effect on the nervous ſyſtem. It ſtimulates, invigorates, gives appetite, promotes perſpiration, and facilitates the performance of different functions of the œconomy. But violent mental exertion, on the contrary, is very detrimental to health.

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We may therefore conclude with obſerving, that the fixt laws of Nature cannot be violated with ſafety. She has ſo framed our conſtitutions, as abſolutely to forbid us to be inactive. If we dare refuſe to comply with her injunctions, we ſhall certainly inflict the ſevereſt puniſhment on ourſelves. If we wiſh for a perfect ſtate of eaſe, we ignorantly wiſh for a perfect ſtate of inſipidity or unhappineſs. That man purſues at leaſt one fair means of enjoying the bleſſings of life, who improves the powers both of body and mind, and preſerves them in vigor, by a moderate exerciſe of both *.

* Fordyce's Elem. of Practice, p. 123.

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SECTION VI.

OF

SEDATIVES.

SEDATIVES are ſuch medicines as tend to diminiſh the animal energy, and conſequently the action of muſcular fibres *. They conſtitute a claſs of very powerful remedies, the abuſe of which is capable of producing the moſt pernicious effects. Hence the neceſſity of a cautious attention to the mode of their operation, and to thoſe conditions of the ſyſtem which require or contraindicate their uſe. Many of the remedies, which have been before treated of, are truly ſedative in their effects, but the conſideration of the abuſe of thoſe ſhall not be here reſumed. I mean to ſpeak of the abuſe of ſuch remedies only as are more parti-

* "The means of diminiſhing the mobility and vigor of muſcular fibres are called ſedative powers." Cull. Inſt. of Med. p. 64.——Elem. of Therapeutics, p. 265.

cularly comprehended under the term Sedative. Nor even with this limitation ſhall we find that word correctly applied. There are very few, if any ſubſtances, whoſe action is purely ſedative.—Previous to their ſedative operation, ſeveral individuals of this claſs have frequently a ſtimulant effect on the ſyſtem; in conſequence of which they are apt to increaſe the action of the heart and arteries. Wine, ſpirits, opium, &c. are evidently poſſeſſed of this power. They are capable of exhilarating the mind, of quickening the circulation of the blood, of promoting the cutaneous excretion, and increaſing the heat of the body and the rarefaction of the fluids. After their ſtimulant effect, theſe remedies, if given in a ſufficient doſe, operate as ſedative. Their ſedative power diſcovers itſelf by weakening the action of the nervous ſyſtem, and conſequently of the heart and muſcular fibres in general. During their operation, the ſenſibility of the nerves is diminiſhed, but particularly of thoſe that are diſtributed on the part to which the ſedative is applied. A general ſenſe of heavineſs and debility is at length brought on, and is frequently followed by ſleep *. If the doſe be large enough, the

* Such is the effect of powerful ſedatives.

the ſleep induced will terminate in lethargy and death *.

The combination of ſuch oppoſite powers has rendered it extremely difficult to aſcertain with correctneſs the proper uſe and real effects of theſe remedies. From this cauſe a great diverſity of opinions has ariſen, not only in regard to the general theory of their action, but concerning even the propriety of their adminiſtration in numbers of diſeaſes. Their ſtimu-

* Lect. on the Mat. Med. p. 331, 332. "The effects of opium are theſe. Firſt a frequency of pulſe, after which the body is ſenſibly warmed, generally with a redneſs and flushing of the countenance. While theſe effects proceed, a ſerenity of mind enſues, and a lively imagination, which, when it occurs, is almoſt conſtantly of the chearful and pleaſurable kind. To theſe, in particular perſons, often ſucceed chagrin, irritability and iraſcibility. By the time that theſe become remarkable, the ſenſes appear imperfect, &c. The imperfection of the ſenſes proceeds to a total want of ſenſibility, which ends in ſtupor and appearance of ſleep. Under this, the pulſe is pretty conſtantly full and frequent, though varying in different perſons. During the ſleep a ſweat takes place while the other ſecretions are ſenſibly diminiſhed. After this the perſon is awaked, and if no other ſtimulus takes place, he is attended with a ſenſe of coldneſs and weakneſs. Such is the ſeries of phenomena, which plainly points out a mixture of ſtimulant and ſedative."

lant effects have often paſſed unnoticed, and have been by ſome queſtioned or denied.

Under this claſs are comprehended, not only ſedatives of a mild nature, but many active narcotic medicines, ſuch as opium, hemlock, henbane, nightſhade, &c. Few of theſe however are in general uſe as ſedatives. I ſhall therefore confine myſelf to ſpeak only of the abuſe of Tea, Coffee, Tobacco and Opium.

We ſhall begin with the abuſe of Tea and Coffee, which ſhall be conſidered together. Some of my readers may perhaps be rather ſurpriſed to find thoſe two vegetable matters, which they have been accuſtomed to think perfectly harmleſs, claſſed among ſuch active poiſonous remedies. But mild as they may be thought, it had been far better for mankind if the uſe of them had never been known. Though they are poſſeſſed of a ſedative power, which is ſmall in compariſon with that of many other ſubſtances; yet in conſequence of the frequency of their uſe, they have proved upon the whole far more pernicious in their effects, than many ſtrong deleterious ſedatives, the uſe of which in practice has been confined to a few particular caſes.

Tea

Tea and coffee, eſpecially when taken too freely, are hurtful to the nervous ſyſtem *. They are in fact found capable of producing indigeſtion, acidity, heartburn, ſpaſmodic pains of the alimentary canal, watchfulneſs, tremors of the hands, feebleneſs, irritability and dejection of ſpirits. The heat of the water, in conſequence of its relaxing quality, adds undoubtedly to their ill effects; but theſe effects cannot be juſtly attributed to the warm water alone †.

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* Percival's Eſſays, vol. I. p. 129. "Tea, when received into the ſtomach, is highly debilitating and relaxant, and the immoderate uſe of it is attended with the moſt pernicious effects."

"In delicate habits, coffee often occaſions watchfulneſs, tremors, and many of thoſe complaints which are denominated nervous. It has even been ſuſpected of producing palſies, and from my own obſervations I ſhould apprehend not entirely without foundation. Slare affirms, that he became paralytic by the too liberal uſe of coffee, and that his diſorder was removed by abſtinence from that liquor." Ibid. Vol. II. p. 128.

† Speaking of tea and coffee, Dr. Cullen obſerves, that "The weakening the tone of the ſtomach by frequent uſe, weakening the ſyſtem in conſequence, inducing tremors and ſpaſmodic affections, are the effects of the tea itſelf, though in ſome meaſure alſo of the warm water. This applies to tea chiefly.

Although on particular occaſions tea and coffee, in conſequence of their ſedative power, be found to relieve the ſymptoms of head-ach, ſpaſms, indigeſtion, &c. yet, like ſpirits rendered habitual, they only palliate for a moment thoſe morbid affections, which they at firſt induce and afterwards continue to ſupport. In this effect, the action of theſe vegetables bears ſome reſemblance to that of emetics, purgatives, blood-letting, &c. all which tend to relieve the very diſorders they have occaſioned.

The general conſent of the moſt able and experienced phyſicians may be alleged in proof of the pernicious ſedative action of tea * and coffee. The

chiefly. I have a ſtomach very ſenſible, which I have found to be hurt by tea, which I attributed to warm water; but, having uſed ſome indigenous plants with the ſame heat of water, I found no harm enſue, and this I have repeated above fifty times.——Many others I know who have had the ſame experience. The ſame effects are not ſo remarkable in coffee, but ſtill experience ſhews them to be of the ſame nature." Lect. on Mat. Med. p. 358.

* Vid. Percival's Eſſays, Medical and Experimental, vol. I. p. 135. "An ingenious Phyſician, who has done me the honour to adopt my ſentiments, and to quote my arguments againſt the uſe of tea, in his Inaugural Diſſertation, publiſhed at Leyden, 1769, has confirmed my teſtimony by the following

The fact indeed can hardly be diſputed. I have often been myſelf a witneſs of the ill effects here

lowing experiments. "He injected into the cavity of the abdomen, and into the cellular membrane of a frog, about three drachms of a highly ſcented, and pellucid liquor, which exhibited no ſigns of aſtringency, nor had any oil floating on its ſurface, diſtilled from half a pound of fine hyſon tea. In twenty minutes the hinder extremities of the frog were ſtrongly affected, and continued ſo four hours, whilſt the animal remained in a torpid, inſenſible ſtate upwards of nine hours, and then recovered by degrees its former vigour. He made the ſame experiment with the *reſiduum*, left after diſtillation, which produced no ſenſible effect."

"He applied to the iſchiadic nerves of a frog, when laid bare by diſſection, and to the cavity of the *abdomen*, the ſame ſcented, diſtilled liquor mentioned above. In half an hour the hinder extremities became totally paralytic, and about an hour afterwards the frog died. The *reſiduum*, after diſtillation, was applied to another frog under the ſame circumſtances, but ſeemed to produce rather an aſtrictive, and ſtimulating, than narcotic effect. He prepared an extract from this *reſiduum*, which being diſſolved in water, and uſed in a ſimilar manner, had no viſible operation."

"Theſe experiments demonſtrate, that the pernicious effects of tea depend on its more volatile parts, which are diſſipated in a great degree by long keeping, by haſty drying, or by reducing it to the form of an extract. I have ſeen and taſted of ſuch an extract, made in the Eaſt-Indies, which though bitter and aſtringent, was by no means unpalatable. A preparation of this kind, diſſolved in hot water, would be a good ſubſtitute for the leaves of the tea plant."

here mentioned. I have ſeen a ſtrong infuſion of tea repeatedly produce indigeſtion, tremors, and dejection of mind, when warm water has had no ſuch effect. In many nervous diſorders where the ſyſtem is weak and irritable, theſe ſedatives are particularly injurious. Though there are ſome conſtitutions ſo robuſt, as not ſenſibly to feel the effects of their ſedative quality; yet the ſame argument might be alleged with equal ingenuity in favor of the habitual uſe of opium, ſpirits, and many other remedies poſſeſſed undoubtedly of noxious powers.

An unlimited abuſe of Tobacco has very univerſally prevailed among mankind, in ſpite of the acrid burning taſte and ſtrong diſagreeable ſmell which it poſſeſſes *. Tobacco, although in its firſt operation it is ſtimulant, is afterwards found frequently to act as a powerful ſedative on the brain and nerves. In conſequence of theſe qualities, it excites, when taken into the ſtomach, vomiting and purging, and greatly diſorders the nervous ſyſtem. — Made into an ointment and rubbed on ſome parts of the ſkin, it has been productive of

* Lewis's Mat. Med. p. 390.

of indigeſtion, ſickneſs, giddineſs, head-ach, dejection of ſpirits, and want of reſt.—Employed in the form of ſnuff, tobacco ſtimulates the olfactory nerves, and increaſes the ſecretion of mucus from the naſal membrane. If the perſon be unaccuſtomed to its uſe, it occaſions ſneezing; but afterwards acting as ſedative on the nervous ſyſtem, it often produces loſs of appetite, vertigo, ſtupor, ſickneſs and vomiting. —If the leaves of tobacco be chewed, or if the ſmoke of it be applied to the nerves of the mouth, the effects are ſimilar to thoſe which are excited by the powder employed as ſnuff; with this difference chiefly, that there is a copious diſcharge of ſaliva, inſtead of an increaſed ſecretion of mucus from the noſtrils. — From theſe facts it appears that tobacco, in whatever manner it is uſed, proves itſelf to be poſſeſſed of deleterious narcotic powers, fitted to deſtroy the functions of the nervous ſyſtem *.

Sir John Pringle, whoſe judgment and accuracy of obſervation is confeſſedly great, informed a phyſician, an intimate friend of mine, who was much addicted to the uſe of ſnuff, that, during the courſe of a long and extenſive practice, he had frequently found the ſedative quality of

* Lect. on the Mat. Med. p. 355.

tobacco highly injurious to health. He has had the ſtrongeſt reaſons to believe, that it has produced weakneſs of the nerves, tremors of the hands, loſs of memory, and ſometimes even ſlight paralytic affections. On ſeveral occaſions, I think, I have found theſe obſervations ſtrictly true. Tremors of the hands in particular ſeem to be a very common effect of the liberal uſe of tobacco.

We may obſerve too, that, in ſpite of all precaution, part of the plant, when chewed in the mouth or uſed as ſnuff, will in all probability paſs into the ſtomach, where its operation will be powerful in deſtroying the tone of that organ, in diſturbing digeſtion, and of courſe weakening the whole ſyſtem. The uſe of tobacco therefore is particularly contraindicated in the diſorders of the ſtomach and bowels.

Under this article, I would juſt hint at the well-known fallacious argument, which ſome advance with obſtinacy in defence of a habit they are reſolved to continue. But we may obſerve, that, although a few conſtitutions are able to bear, with apparent impunity, the ſedative powers of tobacco, yet this fact, as

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was intimated in regard to the habitual uſe of tea, ſpirits, bleeding, &c. affords but a weak proof in favor of its general uſe.

Opium is undoubtedly the moſt important ſedative yet known to the practitioners of medicine. It is a remedy no leſs powerful in its operation than general in its uſe, and therefore daily productive of much good or evil, according to the propriety or impropriety of its adminiſtration.

I have ſaid it is frequently ſtimulant in its firſt operation, but afterwards proves ſedative. The remarks which have been made on the general effects of ſedative medicines, are all applicable to opium. By the uſe of it, we are able to cure or palliate an infinity of diſorders. Opium is a ſovereign remedy for removing irritation and all inordinate motions of the nervous ſyſtem, as well as for mitigating the agonies of excruciating pain. Without opium, or ſome other remedy of ſimilar virtues, the art of medicine would be extremely defective.

Yet, valuable as it is, no remedy has been more univerſally abuſed. It is frequently

given without Neceſſity. A habit by this means is eſtabliſhed, which is extremely pernicious to health. The Turks are amazingly addicted to the uſe of opium. They find its temporary ſtimulant effects, cordial and refreſhing; giving new life and vigor, and in conſequence of habit, becoming neceſſary to ſupport their ſtrength. Numbers among ourſelves, having unhappily fallen into the ſame abſurdity of conduct, have experienced the ſame effects, reſulting from the compound action of the ſtimulant and ſedative power of opium. I know ſeveral perſons, who have rendered the cordial virtue of opium habitual, and in ſome meaſure neceſſary for the temporary ſupport of their ſtrength. Thoſe who have accuſtomed themſelves to the uſe of opium in the place of a dram, are obliged conſiderably to increaſe their doſe, if they would obtain from it any evident ſedative effect. Many have fallen at firſt into this pernicious habit from the needleſs, yet too frequent practice, of taking opium as a medicine on account of ſome trivial complaint, which did not require ſuch ſerious treatment. In this caſe, however, the practitioner is more generally in fault than the patient; becauſe the latter having been improperly adviſed to begin the practice, imagines himſelf

himſelf often obliged to perſevere in it. By this means the force of the habit is increaſed, and the patient is led on ignorantly to continue the abuſe of opium.

Such a proſtitution of ſo valuable a remedy is often followed with the moſt ſerious effects. The continued uſe of opium tends to deſtroy the tone of the nervous ſyſtem; to induce debility, tremors, ſpaſms, morbid irritability, hyſterics, the hypochondriac affection, and all the numerous ſymptoms referable to chronic weakneſs *. Yet notwithſtanding theſe pernicious effects, opium affords almoſt inſtant temporary relief to thoſe very morbid ſymptoms, which it has occaſioned and is able to increaſe. This circumſtance, in ſpite of experience, confirms many in an erroneous practice. Opium, like all other active remedies, ſhould only be employed in caſes, where, to avoid a greater evil, we would chearfully ſubmit to undergo a leſſer one.

I proceed to the Neglect or Imprudent Uſe of opium in diſorders; and hope it will appear that I am much more deſirous in this, as in every other

* Lect. on Mat. Med. p. 331.

other inſtance, to aſcertain thoſe changes of the ſyſtem, which really take place in conſequence of the action of a remedy, than curious to know how they are effected.

Before I enter into particulars, I would obſerve in general, that opium, if given in too ſmall a doſe, is very apt to diſappoint us in its operation, acting often rather as ſtimulant than ſedative, increaſing inſtead of diminiſhing irritation, and promoting watchfulneſs and anxiety inſtead of procuring ſleep and eaſe.—If taken in too large a doſe, the conſequences are ſtill worſe. For though it may operate as ſedative, yet its effects are too conſiderable, cauſing a ſenſe of great weakneſs and oppreſſion. In this ſituation, the patient, eſpecially if he be nervous and apprehenſive, is apt to be alarmed, to paſs a reſtleſs night, to ſweat profuſely, to feel faint and dejected, and, tho' he obtain ſome ſleep, to wake in the morning affected with tremors, giddineſs, anxiety and ſickneſs. The proper doſe muſt be regulated not only by the nature of the complaint, but by the patient's age, ſex, temperament and habit of body. One drop of laudanum, given to an infant of two or three months old, is as conſiderable in its effects as twenty drops of

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laudanum or a grain of opium to an adult who is not accuſtomed to its uſe.

After this general remark, we begin with the conſideration of the abuſe and neglect of opium in Fevers.

Opium has very often been preſcribed in theſe diſorders, where it ought to have been cautiouſly avoided; and as often neglected, through a needleſs timidity, where the uſe of it was evidently indicated. I ſhall point out thoſe ſymptoms and combinations of fevers, which regulate the practice with regard to opium, and contraindicate or require its ſedative power.

In conſequence of its ſtimulating quality, opium is to be employed with caution in all inflammatory diſeaſes, eſpecially where the inflammatory ſtate is ſtrongly prevalent. In the inflammatory fever and in the beginning of the ſynochus, when the action of the vaſcular ſyſtem is ſtrong and the impetus of the blood and the heat of the body are increaſed, it is the eſtabliſhed opinion of the moſt experienced phyſicians, that we ſhould in general avoid the exhibition of opium.

If

If topical determination and inflammation ſhould ſupervene on a fever, or if delirium, connected with plethora, ſhould ariſe from an increaſed force of the blood in the veſſels of the brain, opium is undoubtedly improper. At the ſame time it is believed, that the prejudices againſt the uſe of opium in inflammatory diſeaſes have been carried to a length hardly juſtifiable by experience *. For there are many diſorders in which the inflammatory ſtate of the habit prevails, and yet where opium is given with evident advantage. I ſhall afterwards have occaſion to give inſtances of this nature in the ſmall-pox, the meaſles, the catarrh, the rheumatiſm, &c.

Juſt before the paroxiſm of an intermittent, or rather at the beginning of the cold or of the hot fit, an opiate, after the removal of plethora by bleeding, is very properly preſcribed. It moderates the ſymptoms of the whole paroxiſm, ſhortens its duration, determines to the ſurface, ſolves cutaneous ſpaſm, and promotes a warm, gentle, univerſal ſweat, which is in general as much the natural criſis of the diſeaſe, as a profuſe one is the pernicious effect of the hot

* Gregory's Lect. on the Practice.

hot regimen. Notwithſtanding ſome inflammatory ſymptoms ſhould continue, we do not ſcruple in this caſe to exhibit opium.

Tho' it be the preſent eſtabliſhed practice to avoid opium in continued fevers, while any inflammatory ſymptoms remain; yet when theſe are removed, there are many ſtages of continued fevers which admit of very evident relief from the ſtimulant, ſedative, and antiſpaſmodic powers of opium. The uſe of it in ſuch complaints ſhould be regulated in ſome meaſure by thoſe principles, which have been advanced relative to the uſe of wine *. Yet it muſt be confeſſed that the proper management of opium is more nice and intricate. We cannot ſo ſucceſsfully divide the doſes of opium as we can thoſe of wine, though we are often tempted in ambiguous caſes to make trial of the remedy in that way, when we dare not venture to preſcribe it in a full doſe.

We have ſaid that debility often diſpoſes to irritability. This fact is particularly true in regard to febrile diſorders. In nervous and putrid fevers we very often meet with the

* Lect. on Mat. Med.

complication of irritability and great proſtration of ſtrength. In ſuch caſes, opium is frequently indicated, and, on account of its united powers, it is often ſingularly proper and efficacious, not only as ſtimulant for obviating debility, but as antiſpaſmodic for removing the conſtriction of the extreme veſſels, and as ſedative for leſſening the ſymptoms of irritability. If the nervous ſyſtem labor under a high degree of irritation not of an inflammatory nature, opium is one of our principal remedies. In fevers in which there is ſtarting of the tendons, anxiety, watchfulneſs, low delirium, convulſive or ſpaſmodic affections, and other ſymptoms of irritability, but unattended with any topical inflammation, opium is employed with great ſucceſs. In the maniacal delirium, which ſhould be accurately diſtinguiſhed from the phrenetic, opium is highly ſerviceable. In this caſe, the remedy, in order to obtain its moſt beneficial operation, ſhould be given in large doſes *. How little to be commended is that practice, which at ſuch critical periods of ſo dangerous a diſeaſe, neglects the moſt powerful means of cure, and ſubſtitutes

* Cullen's and Gregory's Clinical Lectures.

ſubſtitutes in their place ſmall doſes of camphor, valerian, ſaffron, contrayerva, ſnakeroot, or any other ſelected from ſuch a rude heap (I had almoſt ſaid) of uſeleſs medicines.

Opium, by moderately exciting the action of the heart and arteries, tends to promote perſpiration and to ſolve the ſpaſmodic conſtriction of the extreme veſſels with greater ſafety than any ſtimulant which is leſs antiſpaſmodic. It is found by experience, that in the latter ſtages of fevers without inflammatory ſymptoms, opium may with propriety be uſed with more freedom than was formerly imagined. Nothing indeed has proved a greater hinderance to the advancement of medical ſcience, than general rules admitted as true, but unſupported by facts. In many compound remedies called alexipharmic, that were ſo much in uſe among the antients, opium was the chief ingredient on the action of which the efficacy of the whole principally depended. But we can hardly ſuppoſe it probable that thoſe alexipharmics, notwithſtanding the imprudent admixture of inflammatory ſtimulants, were never employed with beneficial effects. Experience contradicts ſuch a ſuppoſition.

I would further obſerve, that, in epidemic fevers of an infectious malignant nature as well as in the plague itſelf, in which it is prudent on account of their uncommon violence to attempt the cure by ſudorifics, opium is one of the ſafeſt and moſt effective for the purpoſe of fulfilling that indication. The medicine, it is thought, would be improved, if given in conjunction with neutral ſalts and emetics, as in the uſeful compoſition of Dover's powder. Such an addition, which is perfectly ſafe, ſeems to diminiſh the ſedative power of opium, but to increaſe its antiſpaſmodic power, by determining the blood more copiouſly to the ſurface and promoting the cuticular diſcharge.

Whenever a ſymptomatic diarrhæa occurs in fevers, which is not critical nor attended with any relief of the ſymptoms, opium, when the ſtomach or inteſtines are not affected with inflammation, may be properly preſcribed, particularly in the advanced ſtages of the diſeaſe, when the conſtitution is greatly debilitated and apt to ſink under the evacuation.—If an inflammatory tumor, tending to ſuppuration, appear in the lymphatic glands or in any other external part of the body, opium may be required to mitigate the pain, which, when attendant

tendant on ſuch inflammations, is capable of giving a dangerous irritation to the nervous and vaſcular ſyſtems. Such inflammations are ſometimes critical in fevers; and opium greatly facilitates their progreſs to ſuppuration. — If catarrhal ſymptoms be complicated with a fever, if the lungs be irritable and the cough ſevere, without a peripneumony or any conſiderable hardneſs of the pulſe, opium is often extremely ſerviceable, in leſſening the irritability of the lungs and eaſing the cough.— When a favorable criſis has taken place, and the patient is convaleſcent, but oppreſſed with ſymptoms of irritability, anxiety, and watchfulneſs, opium acts as a ſtrengthener, procures ſleep, and haſtens the recovery *. To avoid inducing a habit, we ought to omit the uſe of opium as ſoon as we prudently can, though we ſhall frequently ſee the patient ſolicitous to continue a remedy which he has found ſo truly cordial and refreſhing.

In Topical Inflammations, the uſe of opium is generally prohibited. Phyſicians are agreed that its operation in ſuch diſorders has often aggravated the ſymptoms of inflammation, and been followed with pernicious effects.

* Pringle's Obſer. p. 132.

fects. This obſervation, as far as is yet aſcertained by experience, ſeems well grounded. The ſtimulus of opium, by accelerating the circulation of the blood, tends to increaſe inflammation. Its ſedative power, if obtained to ſuch a degree as greatly to diminiſh the reaction of the heart and arteries in general, and of the arteries in particular of the inflamed part, might too much interrupt thoſe ſalutary efforts of nature, which, founded on a law of the conſtitution, cannot with ſafety be thus ſuddenly checked by art. In the natural cure of diſorders, nature reſembles a wiſe experienced ruler, who will with pleaſure admit of friendly aid, but cannot bear to be inſolently controuled. In the inflammation of the brain, of the lungs, of the alimentary canal, &c. opium cannot in general be employed without manifeſt danger. In conſequence only of its antiſpaſmodic and ſudorific powers, is that danger rendered leſs.

Such is the general ſtate of facts with regard to the uſe and abuſe of opium in this order of diſeaſes. There are however particular caſes of inflammation, where opium is found ſerviceable, and the neglect of it juſtly conſidered as the effect of ignorance and an abuſe of medicine.

dicine. Some of theſe I ſhall endeavour to point out.

In external inflammations, tending to ſuppuration, violence of pain, as in the inflammatory tumors attendant on fevers, indicates frequently the uſe of opium. Its complicated operation will promote ſuppuration and mitigate the pain. But where we wiſh to avoid ſuppuration, the ſucceſs of the remedy is ſomewhat dubious. In diſorders ariſing from the inflammation of an internal organ, ſuppuration is often as fatal as gangrene and effuſions of blood into the cellular membrane.

In the inflammation of the eye, nothing can indicate the uſe of opium except violent pain and want of ſleep. After proper evacuations, thoſe ſymptoms indeed require ſometimes the ſoporific virtue of opium, to prevent conſequences which might otherwiſe prove dangerous and alarming. This inflammation very rarely terminates in ſuppuration; therefore we need leſs regard the ſuppuratory effects of opium. By this means the conſtitution is preſerved, and ſleep, which is very ſerviceable to an inflamed eye, is procured. But we ought

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in this, as in all other complaints, to continue the uſe of opium no longer than is abſolutely neceſſary.

In the ulcerous ſore throat, the fever is of the nervous and putrid kind. Though the topical inflammation hardly ever requires the exhibition of opium, yet the attendant febrile ſymptoms may ſometimes render it proper. The method of giving it at ſuch conjunctures, may eaſily be aſcertained from the obſervations made on its uſe in fevers. Whether or no is the antiſpaſmodic power of opium indicated in the croup, when ſpaſm ſupervenes on inflammation and threatens ſuffocation?

In the pleuriſy and inflammation of the lungs, opiates cannot be admitted till towards the decline of the diſeaſe. But when the ſymptoms of inflammation are much abated, and the patient, having been weakened by the diſeaſe and the repeated loſſes of blood, finds himſelf reſtleſs at night, and troubled with a ſenſe of irritation in his throat, along with frequent coughing and a difficult expectoration of a thin acrid matter, opiates are adminiſtered with the greateſt advantage. They mitigate

mitigate the anxiety, eaſe the cough, procure ſleep, and, in conſequence of cauſing a temporary diminution of the irritability of the lungs, favor a free copious expectoration of viſcid phlegm.—On the ſame principle may be explained the great utility of opium in the catarrh; in which diſorder, after the removal of plethora, it ought, when indicated, to be preſcribed with freedom.

In the inflammation of the kidney, not complicated with calculous concretions in that organ, opium is pernicious. But when the irritation of a ſtone tends to excite and ſupport the inflammation, no remedy is more proper than opium to diminiſh that irritation and conſequently its effects. In the firſt caſe, copious bleeding is required. In the ſecond, we may be more ſparing of the vital fluid. The diſtinction therefore of this diſorder, as produced by different cauſes, is ſometimes very important. This diſtinction will be beſt founded on a conſideration of the hereditary temperament of the patient, the previous ſtate of the kidnies relative to calculous affections, and the manner in which the inflammation began. For the ſtone is an hereditary diſeaſe. The melancholic temperament, eſpecially at the decline

of life, is very ſubject to calculous complaints. If the perſon has been formerly afflicted with ſymptoms of the ſtone, we may juſtly conclude that calculous concretions in the kidnies have contributed greatly towards the production of the inflammation. The pain, which occurs when this laſt mentioned cauſe excites the diſorder, begins at firſt and uſually continues ſome time unattended with fever. But in the original inflammation of the kidnies, the fever is inſeparable from the very firſt attack of the diſeaſe.

In the inflammation of the womb, opium very often is imprudently employed; but its effects are always injurious. Difficult labors, and the unfortunate errors ſo frequently committed in the practice of midwifery, are, as we have obſerved, the moſt common cauſes of this inflammation. Pains in the region of the womb often occur after delivery, the effect either of inflammation or of ſpaſm. A proper diſtinction being made, the practitioner ſhould remember that though the inflammatory pains are increaſed, the ſpaſmodic pains are greatly relieved by the uſe of opium.

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In the gout, the abuſe of opium has been ſingularly great. In the beginning or near the height of the regular inflammatory ſpecies of the diſeaſe, opium cannot be admitted with ſafety. But towards the decline of the fit, when the inflammatory ſymptoms have almoſt entirely diſappeared, opium is highly ſerviceable in abating pain, procuring reſt, and ſhortening the duration of the diſeaſe *. — In the miſplaced and retroceding gout, where there is an inflammation of the viſcera, opium is highly dangerous. But in the irregular gout, attended with a ſpaſmodic affection of ſome internal organ, as of the lungs, the ſtomach, the inteſtines, &c. opium is a remedy, by the efficacy of which we are frequently able to effect the moſt ſalutary changes in the ſtate of the diſeaſe. But in ſuch caſes we ſhould be extremely cautious not to miſtake inflammation for ſpaſm, as the error will be highly dangerous.

We paſs from inflammations to the abuſe of opium in Eruptive Diſorders. The fever, which accompanies the eruption, demands the

* Lect. on Mat. Med. p. 335.—Greg. Elem. of Practice, p. 198, where we find recommended "the cautious uſe of anodynes in the decline of the paroxiſm."

cloſeſt attention. For by the nature and ſymptoms of the fever, a prudent phyſician will, though not wholly, yet principally regulate the conduct of his practice. This obſervation is ſtrictly true with regard to the uſe of opium.

In the plague, the thruſh, and the miliary eruption, where there is a nervous fever or a ſynochus, opium is employed in the ſame manner as in thoſe particular fevers.—This remark alſo is in a great meaſure juſt, with regard to the meaſles and ſmall-pox. In theſe two eruptive diſorders, which are the moſt perfect examples of their kind, we have recourſe to opium with great freedom, even when ſtrong ſigns of the inflammatory ſtate yet remain in the conſtitution. After neceſſary evacuations, opium is found very ſerviceable in the meaſles, by facilitating the progreſs of the eruption, by diminiſhing the irritability of the lungs, and eaſing the cough and other catarrhal ſymptoms *. This practice was ſucceſsfully adopted by the great Sydenham †. In the ſmall-pox opium is

* Greg. Elem. of Pract. p 88.

† Sydenham Op. ſect. iv. cap. 5, p. 198. "Et præ reliquis diacodium omni nocte ab ipſo morbi inſultu per totum ejus decurſum exhibendum curavi."

is ſtill more particularly indicated, not only as uſeful for obviating certain ſymptoms of the fever, but for promoting the due maturation of the puſtules, for procuring ſleep, and leſſening the irritability and ſoreneſs of the ſurface, which are the unavoidable conſequences of ſo many cutaneous inflammations tending to ſuppuration ‡. I do no trecommend the uſe of opium in the eruptive fever of the ſmall-pox. But about the ſixth day of the diſeaſe, reckoning from the firſt attack, we may with the greateſt ſafety and ſucceſs exhibit this admirable remedy. We ſhould remember that a ſmall doſe of opium will be very inefficacious; but that too large a one will ſtupify the patient and impede the favorable progreſs of the diſeaſe.

In Hemorrhages, as opium through inattention may often be abuſed, ſo with caution it may often be advantageouſly employed.

In the ſpitting of blood, when the ſyſtem is plethoric, when the hemorrhage is free and copious, when the lungs are not obſtructed with tubercles nor injured by any narrowneſs in the conformation of the cheſt, and when a morbid

‡ Greg. Elem. of Pract. p. 77.

morbid determination of blood to the lungs takes place, opium is a very doubtful remedy. In ſuch circumſtances it is hardly to be preſcribed with ſafety, and much leſs with ſucceſs. But when plethora is conſiderably removed, when the topical determination to the breaſt is diminiſhed, when the blood is expectorated in ſmall quantity mixt with phlegm or purulent matter, when the lungs are obſtructed with tubercles which are moſt frequently of the ſcrophulous kind, and when the patient is troubled with a conſtant ſenſe of tickling in his throat, and a painful irritating cough, opium undoubtedly is a proper and neceſſary medicine *. In ſuch caſes, it will often procure reſt, quiet the cough, leſſen the pain and irritation of the lungs, facilitate expectoration, diminiſh the hemorrhage, and favor the healing of the ruptured veſſels.—In pulmonary conſumptions too, the utility of opium may eaſily be aſcertained from what has been obſerved in regard to the treatment of the ſpitting of blood. Want of reſt and conſtant coughing are for the moſt part relieved by opium.

* Dr. Gregory, in his Lectures on the Practice of Medicine, recommended, in this ſpecies of the diſeaſe, the uſe of opium.

opium †. Where it agrees with the conſtitution it is often productive of good effects, either by promoting a cure, or by palliating the ſymptoms, giving eaſe, and ſmoothing the avenues of death.

In the hemorrhoids, particularly when they may be conſidered as a paſſive hemorrhage and the effect of coſtiveneſs, great pain requires and is relieved by opium.—In that ſpecies too of the hemorrhoids, complicated with a deſcent of the rectum, where the frequency of alvine dejection augments the complaint, opium may be neceſſary not only to obviate ſpaſm and to procure eaſe, but ſometimes to diminiſh the number of ſtools and to preſerve a regular ſtate of the body, which is very conducive to the cure. When pain and coſtiveneſs are united, and the practitioner finds it expedient to obviate at the ſame time both thoſe ſymptoms, opium and a purgative medicine may with great propriety be exhibited together. For the ſedative will only retard and moderate the effects of the purgative, but by no means prevent its operation.

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† Greg. Elem. of Pract. § 337.——Monro on the Diſeaſes of Military Hoſpitals, p. 135.

In the uterine hemorrhage, when it occurs unconnected with a ſtate of pregnancy, accompanied with great pain and a continual diſcharge, opium after the removal of plethora is often highly ſerviceable. — If the menſes flow in unuſual quantity with exceſſive pain, which is no uncommon occurrence, particularly at the period of life when nature begins no longer to require the regular returns of that evacuation, opium is a very efficacious remedy. When plethora is abſent, we may in ſuch caſes preſcribe it with ſucceſs.

If flooding ſhould occur during pregnancy, opium ſometimes is ſtrongly indicated. But before the practitioner can proceed in the cure of this or any other complaint with a proſpect of ſucceſs, he ought to have cautiouſly conſidered its cauſes. If he be ignorant of theſe, he will as often injure as relieve his patient by the uſe of opium. For if plethora have occaſioned a flooding during pregnancy, opium will increaſe the evacuation. If an external injury be the cauſe, opium is often improper on account of the inflammation that may occur. If debility and relaxation without ſpaſm have rendered the patient ſubject to the hemorrhage, opium, provided there be no conſiderable

ſiderable pain, is not ſufficiently indicated. But if the paſſions of the mind have had a principal ſhare in producing the complaint, or if, whatever be its cauſes, the diſorder is without plethora or any inflammatory ſtate, and attended with a ſpaſmodic affection and ſevere pain in the region of the womb, opium will often be advantageouſly preſcribed *.

If floodings be connected with labor or with a miſcarriage, and the pains be moderate, that practitioner may be thought too officious, who by the uſe of opium interrupts the progreſs of nature. But if the flooding be great, if the pain (as I have found it in ſuch caſes) be very excruciating, and there be no ſuſpicion of an inflammatory affection, opium is employed in conſiderable doſes with very happy effect. It acts as aſtrictive, anodyne and antiſpaſmodic; it leſſens the diſcharge, promotes the expulſion of the fetus, and mitigates the violence both of pain and ſpaſm. We ſhould however be cautious in the treatment of theſe complaints, which are among the moſt dangerous and intricate in the practice of medicine, not to uſe

* Dr. Young's Lect. on Midwifery.——Dr. Mackenzie's Lect. on Midwifery.——Lect. on Mat. Med. p. 348, 349.

opium or any other remedy to the neglect of the more ſerious and important aſſiſtance from the art of midwifery, which the ſymptoms of the caſe often indicate as neceſſary, and experience proves to be highly uſeful.

We come now to give an example or two of the abuſe of opium in Nervous diſorders.

In weakneſſes of the ſtomach and in hypochondriac affections, opium ſhould be employed with great reſerve. Spaſmodic pains however of the alimentary canal, ſo very common and troubleſome in thoſe diſorders, are beſt relieved by opium. Frequent vomiting and great watchfulneſs may alſo require occaſionally the ſame medicine.

In the chloroſis, opium is ſometimes proper on the ſame account as in weakneſſes of the ſtomach. It is indicated likewiſe for the purpoſe of leſſening the ſeverity of pain in the region of the womb, which ariſes in this caſe from the diſtention and ſpaſmodic contraction of the uterine veſſels. This pain, which is often a favorable ſymptom denoting a ſalutary effort of nature, admits of relief from the

the uſe of opium. If the menſes flow with pain and difficulty in conſequence of a ſpaſmodic affection of the uterus, opium tends to give eaſe, and to promote the natural evacuation. If ſpaſmodic pains of the womb precede the true labor-pains for any length of time, or continue to recur after delivery, they may often be mitigated or removed by opium. Spaſm however muſt in this caſe be cautiouſly diſtinguiſhed from inflammation.

In the epilepſy, in the locked-jaw, in convulſions or in the tetany, opium is often employed with ſingular advantage. In theſe caſes, we are frequently neceſſitated to uſe it in very large doſes, otherwiſe we loſe its beneficial effect. A child three months old, afflicted with convulſions, may ſafely take three or four drops of liquid laudanum in a day *. To an adult in the locked-jaw or in the tetany, four grains of opium or eighty drops of laudanum, or even a conſiderably greater quantity, may be given in the ſpace of twenty hours †. A common doſe

* Dr. Hunter, Profeſſor of Anatomy.—Dr. Young's Lect. on Midwifery.

† Dr. Hillary in his Obſervations on the Diſeaſes peculiar to the Weſt-India Iſlands, &c. recommends from gr. vi.

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of opium, while the ſyſtem labors under ſuch a morbid ſtate of excitement, is perfectly uſeleſs.—In caſes of the habitual attacks of the epilepſy or of partial convulſions, more moderate doſes will ſuffice. But in theſe, as in many other nervous diſorders, if we find upon trial that the complaint is not relieved, it is abſurd to continue the uſe of opium; for if it be unneceſſarily employed, it will, as I have before obſerved, weaken the conſtitution, increaſe irritability, and favor the more frequent recurrence of the fits.

In the ſpaſmodic aſthma, which is a nervous diſorder accompanied with great irritability of the lungs, opium, while plethora ſubſiſts, is preſcribed with danger; but when plethora is abſent, it is an uſeful remedy. During the time of its operation, it diminiſhes the irritability and ſpaſmodic contraction of the air-veſſels; mitigates the cough; leſſens the pain, anxiety and difficulty of breathing; ſhortens the

to gr. xx. of Extract. Thebaic. to be given in the ſpace of twenty-four hours according to the exigency of the caſe. He never found that ſuch large doſes of opium produced any ſtupor or great diſpoſition to ſleep. P. 232, 233.

the duration and facilitates the cure of the aſthmatic fit.

In the colic, attended with obſtinate conſtipation, vomiting may ſometimes be mitigated or removed by opiates. For this purpoſe, we exhibit the opium a little before the purgative, or in conjunction with it *. It is worth obſerving too, that as there is always a ſpaſmodic conſtriction of the inteſtines in this diſorder, opium, when there is no vomiting, is often adminiſtered with propriety as ſedative and antiſpaſmodic †. I need not repeat, that colic pains, when they occur as a ſymptom of debility in the alimentary canal without coſtiveneſs, are relieved moſt ſucceſsfully by the ſame remedy.

In the cholera and diarrhæa, opium is often of great uſe, in removing ſickneſs, eaſing ſpaſmodic pains, diminiſhing the increaſed periſtaltic motion of the inteſtines, and leſſening the quantity of the evacuation. In conſequence of this laſt effect opium will often be found beneficial,

* Hillary's Obſerv. on the Diſ. of the Weſt-India Iſlands, &c. p. 192.

† Ibid. p. 191.

ficial, in preſerving the ſtrength of the ſyſtem, and in warding off the dangerous exceſs of debility that frequently occurs in thoſe diſorders. I have already taken notice of the abuſe of purgatives in the diarrhæa, which are ſo often preſcribed on trivial occaſions without even the ſmalleſt colorable appearance of an indication for their uſe. But opiates on the contrary may, both in the cholera and diarrhæa, be given with more freedom and ſucceſs than has generally been imagined, eſpecially when ſpaſmodic pains and great evacuation occur. Yet it deſerves remarking, that if a diarrhæa be critical, the conſequence of a ſalutary effort of nature to free the conſtitution of ſomething morbid, whether acrimonious or ſuperfluous, opium by checking the diſcharge is hurtful to the conſtitution.

In maniacal diſorders, though ariſing from different cauſes, large doſes of opium during the height of a paroxiſm are often requiſite. Without theſe we ſhould in vain attempt to calm the ſtorm produced by ſo great an excitement. Aſtoniſhing it truly is to obſerve, how ſmall an effect is produced even by a very conſiderable quantity of this moſt powerful ſedative. For doſes which in-

deed

deed at other times would dangerouſly diſturb the functions of the œconomy and particularly thoſe of the nervous ſyſtem, ſhall during the violence of a fit of madneſs be ſcarce productive of the ſmalleſt change. But as ſo great an excitement powerfully exhauſts the ſyſtem, we ought to uſe every prudent means either to remove it at once, or to moderate its exceſs and ſhorten its continuance. Opium therefore is ſtrongly indicated, and found of ſingular utility in the cure of madneſs; a diſeaſe in which it is believed there is the greateſt room for real improvements in practice. But improvements will only be made in proportion as the treatment of the complaint ſhall be undertaken, in an extenſive manner, by the united power of parts, induſtry, and medical erudition.

SECTION VII.

OF

TONICS.

TONICS act by increaſing the tone * and vigor of the ſyſtem. Several of the individuals, of which this claſs of remedies conſiſts, have been already mentioned under the head of ſtimulants; and many are not ſufficiently important to require a ſeparate conſideration. In this ſection, it is intended only to treat in general of the abuſe of Cold Bathing, of Metallic Tonics, of Bitters and Aſtringents, but in particular of the Peruvian Bark.

* "In living and healthy animals, the muſcular fibres have a conſtant tendency to contract; and this tendency we call their tone or tonic power. Cullen's Inſt. of Med. p. 68.

Tonics increaſe the firmneſs and coheſion of the ſimple ſolids, as well as the tone and energy of the moving fibres. All tonics of a vegetable nature, and many from the mineral kingdom, are antiſeptic, tending to prevent or to correct the putrefaction of animal ſubſtances. Aſtringents, applied to the tongue, occaſion a conſtriction of its veſſels, which is a ſtrong proof of their tonic power. The bark of the oak and ſome other individuals of this claſs, are capable of producing an evident condenſation in dead animal fibres; a quality of ſuch great importance in the art of tanning *.

If a tonic act upon the external ſurface, as for inſtance the cold bath, the effects of it are readily propagated to the moſt interior parts. If the peruvian bark be taken into the ſtomach, we have great reaſon to believe, that its action on that moſt important organ may, by conſent of parts, be eaſily communicated over the whole ſyſtem. Tonics increaſe the tone of the ſtomach and bowels; they give appetite, moderate the proceſs of fermentation, prevent

* Elem. of Therapeutics, p. 223, 231.

prevent morbid acidities, promote digeſtion, aſſimilation and nutrition. If coſtiveneſs ariſe from weakneſs of the alimentary canal, tonics tend to remove it. If a diarrhæa occur from irritability and relaxation, they check the diſcharge by directly obviating the cauſe. If colic pains, loſs of appetite, frequent vomiting, palpitations of the heart, dejection of ſpirits, obſtruction of the menſes, defective perſpiration, &c. are the conſequences of weakneſs and mobility, no remedies are ſo well adapted for the removal of thoſe morbid affections. In all caſes in which evacuants are to be avoided, tonics may generally be employed with advantage. Hence the danger and fallacy of that doctrine, which perſuades the practitioner to conſider evacuations of one kind or another to be for the moſt part proper in the treatment of diſorders.

Yet valuable as tonic remedies are, the Unneceſſary Uſe of them is both dangerous and abſurd. The art of medicine can add nothing to perfect health. From the frequent and needleſs uſe of them, tonics loſe their efficacy and are found much leſs ſerviceable when really required. But this is by no means

the worſt conſequence of the abuſe. They tend to bring on a rigidity of the animal fibres. Bitters too in particular and the peruvian bark, if imprudently taken for a long time without intermiſſion, have been found in fact to have impaired or even deſtroyed that tone of the ſyſtem, which the prudent adminiſtration of them ſo greatly increaſes and ſupports *.

Having made theſe few obſervations on tonics in general, I ſhall deſcend to particulars; but in order to render this intereſting ſubject ſomewhat limited and free from endleſs reſtrictions, I ſhall ſingle out by way of an example the Peruvian Bark, a tonic which is the moſt important and the moſt efficacious. In regard however to the treatment of thoſe morbid ſtates of the body, where any other tonic is very liable to be improperly employed or neglected, we ſhall not intentionally omit any obſervation that may prove in the leaſt uſeful; unleſs, being evident, it follows of courſe from what ſhall have been previouſly advanced.

In

* Dr. Cullen's Lectures on the Practice.—Lectures on the Mat. Med. p. 280, 281.

In Fevers, the peruvian bark is frequently abuſed. For as it increaſes the tone of the ſyſtem, it is found injurious in all thoſe ſtages of fevers, where the tone is already too great. In general, therefore, we cautiouſly avoid the uſe of it in the inflammatory fever, in the hot fit of an intermittent, in topical inflammations, and wherever the action of the heart and arteries is morbidly increaſed. — At the ſame time we may obſerve that this valuable remedy is often neglected in thoſe ſtages of febrile affections, in which the uſe of it is highly neceſſary; and that when it is given, the mode of its adminiſtration is frequently ſo injudicious as to diſappoint not only the practitioner, but his injured patient, who perhaps feels himſelf at laſt diſſatisfied (if not diſguſted) with the only medicine, which, prudently managed, might have radically removed his complaint.

In the Intermitting Fever, ſome phyſicians are of opinion the bark ought to be called a ſpecific. Though in this caſe we would avoid the uſe of that term, yet we may undoubtedly advance from experience, that it is a ſovereign remedy in all ſuch fevers. It is a happy circumſtance for mankind, and a ſtrong proof of the great efficacy of this medicine, that ſo common

common and obſtinate a diſorder as the intermittent, is often ſo quickly, ſo eaſily, and ſo ſucceſsfully removed by the peruvian bark.

If we take a ſlight view of the cauſes and nature of the intermitting fever, the operation and effects of this remedy will appear more evident. Contagion and the vapors ariſing from low marſhy countries, are the principal remote cauſes of this diſorder. Their powerful action is frequently aided by other remote cauſes, ſuch as expoſure to cold, errors in diet, exceſs of venery, nocturnal watchings, immoderate exerciſe either of the mind or of the body, conſiderable evacuations, the neglect of habitual exerciſe, the depreſſing paſſions of the mind, &c. All theſe remote cauſes evidently act by inducing debility. But debility ſucceeded by a ſpaſmodic conſtriction of the extreme veſſels, may, it is conjectured, lay the foundation of the enſuing paroxiſm. The great Boerhaave ſeems to have been ſomewhat of this opinion, when he affirms, that in part the proximate cauſe of intermittents is an INERTIA LIQUIDI NERVOSI, which implies a debility of the nervous ſyſtem *. In con-

* Van Swieten fully explains the meaning of this paſſage. He not only proves clearly the preſence of debility, but like-

confirmation of this important doctrine, we may obſerve that the intermittent fever begins with the moſt manifeſt ſymptoms of debility, ſuch as languor, laſſitude, coldneſs, tremor, a weak frequent pulſe, &c. all which are evidently the effects of a ſedative cauſe. — By the paleneſs and dryneſs of the ſurface during the cold fit of the fever, a ſpaſmodic ſtricture of the extreme veſſels is moſt clearly proved to have taken place. To obviate ſuch cutaneous conſtriction, and to reſiſt the operation of a ſedative cauſe, an effort is made in the ſyſtem, which is termed its reaction. The native heat of the body, and the ſtrength and frequency of the contractions of the heart and arteries, are increaſed. The vigor of the reaction, conſidered excluſive of the cauſe of the diſeaſe, is greater in proportion to the irritability and ſtrength of the conſtitution. That effort of nature, inexplicable to us, takes its riſe from one of the moſt noble and fundamental laws

likewiſe evidently hints at the ſpaſmodic conſtriction of the veſſels. Per illam autem viſcoſitatem, ſive lentorem, liquidi arterioſi non intelligitur adeo craſſities aucta & major cohæſio molecularum ſanguinis inter ſe, ſed qualiſcunque demum ad expeditum per vaſa motum ineptitudo; ſive fluidi movendi, ſive vaſorum continentium, vel virium moventium vitio hoc contingat. Comment. in Aphor. 755.

laws for the preſervation of animal bodies *. In conſequence of the reaction, a full determination is made to the ſurface, the conſtriction of the cutaneous veſſels is overcome, perſpiration is rendered free, and the paroxiſm is terminated by a warm univerſal moiſture upon the ſkin. Whether we may conſider thoſe two ſtates of debility and ſpaſm, as the proximate cauſe of intermitting fevers, I will not preſume to determine †. But certain it is, that they occur in ſuch fevers; that reaction ſeems to follow them as an effect; and that all the three ſtates of debility, ſpaſm, and reaction, taken together, are uſeful as well in the explanation of the ſymptoms of intermittents, as of the operation of thoſe remedies which are the moſt conducive to their cure ‡.

After

* Cullen's Inſtit. of Med. p. 85.

† Nato autem frigore, conſtrictis arteriis, augetur obſtaculum ſanguini per illas movendo, ſimulque per venas rediens ſanguis cor irritat quidem, ſed ob dictas rationes ex corde per arterias libere pelli nequit. Patet ergo, ſatis probabilem eſſe illam opinionem, quæ primum paroxyſmi febris intermittentis initium, atque ejus cauſam proximam, ſtatuit inertiam liquidi nervoſi, quam brevi ſequetur vel et comitabitur illa liquidi arterioſi viſcoſitas, id eſt, impedimentum liberi ejus motus per vaſa, uti modo dictum fuit. Comment. in Aph. 755.

‡ Cullen's Lectures on the Practice.——Gregory's Elem.

of

After theſe few remarks on the out-lines of the doctrine of intermittent fevers, I would obſerve that the bark, by obviating debility and ſpaſm, prevents the recurrence of paroxiſms. By this means the cauſe is removed, and the diſeaſe ſucceſsfully cured. That the bark poſſeſſes ſuch tonic powers is indiſputable. It is an equally undoubted truth, as the Baron Van Swieten clearly ſhews, that intermittents are diſorders of the nervous ſyſtem *. Had the great commentator been conſiſtent with himſelf in ſupporting that doctrine which he ſeems to have underſtood, and not fallen ſo frequently into his old miſtakes concerning lentor, obſtruction, and ſuch like hypothetical notions, his obſervations on fevers, which form part of an excellent performance, would have been more valuable and inſtructive. Theories in medicine ſhould always be embraced with the greateſt caution, and founded ultimately on facts.

of Practice, p. 29. "During the different ſtages of the paroxiſm, there is a greater or leſs degree of nervous power, of ſpaſmodic ſtricture, and of increaſed motion of the blood."

* Vid. Swieten's Comment. in Aphor. 755.

In the cure of intermittents, the bark is the moſt efficacious in ſubſtance. No menſtruum, no chymical proceſs, yet known, can extract its virtues ſo perfectly as the animal fluids and the proceſs of digeſtion. This remedy too ſhould generally be preſcribed in large quantity. From ignorance of this particular, it is often given without ſucceſs, when otherwiſe it might undoubtedly have been rendered effective. Five or ſix drams taken during an intermiſſion, will generally be found neceſſary to prevent the recurrence of the diſorder. In obſtinate caſes, twelve drams, or even two ounces, may be required. We ought to continue the uſe of the bark in a proper quantity during the intermiſſions, till we have completely obtained a cure†.

Some

† Vid. Fordyce's Elem. of Practice, p. 180. "As great a quantity is to be given at a time, as the patient's ſtomach will bear, and the intervals between the doſes are to be as long as poſſible. The bark is to be omitted during the time the ſubſequent paroxiſm ſhould have continued, and is then to be repeated in the ſame quantity and manner, eſpecially if any ſymptom of the fit ſhould have recurred; provided always that the paroxiſm has been greatly leſſened. The ſame meaſures are to be purſued in the third period: afterwards the medicine is to be omitted for four or five days and then returned to for 24 hours; and this is to be practiſed twice

Some practitioners adviſe us to begin with adminiſtering the medicine as ſoon as the febrile paroxiſm is ended, and the intermiſſion fairly begun. Others recommend the practice of giving a dram of the bark every hour for the laſt ſix, eight, or ten hours of the intermiſſion. Each mode of exhibition has its advantage. Sometimes in the tertian, but always in the quotidian, the firſt method is preferable, and is found by experience the moſt convenient and ſucceſsful. For few patients will be prevailed upon to ſwallow in ſo ſhort a time as ſix or eight hours, as many doſes of ſo ungrateful a medicine; and, were they willing, their ſtomachs would frequently nauſeate and reject them. On the other hand, in the quartan, and ſometimes in the tertian, a medium may be fixed upon between the two opinions; and ſix, eight, or ten drams of the bark taken during the ſpace of the laſt twelve, ſixteen or twenty hours. By following this plan, we ſhall probably practiſe with the moſt ſucceſs. At the ſame time it is granted, that, if the patient can with

 ſufficient

twice or thrice, (at longer intervals each time.")—Cleghorn obſerves that if the ſick "were obliged to remain in the iſland, the beſt chance they had of eſcaping a relapſe, was to take a doſe of the cortex every morning and evening for ſeveral weeks, &c." On the Diſ. of Minorca, p. 231.

ſufficient eaſe take, in the manner above-mentioned, a doſe of the bark every hour juſt before the attack of the ſubſequent fit, the force of its action will be more powerful as it will be more concentrated.

When we preſcribe the bark in ſubſtance, it may be given in the form of a bolus, wrapt up in wafer, which is a moſt convenient method for concealing the taſte of the medicine. Where that mode of employing the bark is not convenient, the powder may be properly taken in other forms. It is ſometimes adviſeable, on theſe occaſions, to uſe the bark in conjunction with mild ſtimulants and aromatics, which, by gently exciting the muſcular action of the ſtomach, tend to prevent the remedy from inducing a ſenſe of uneaſineſs and oppreſſion *. If the patient cannot take the bark in ſubſtance, we may uſe the cold infuſion, the decoction, or the extract, and in as conſiderable doſes as the ſtomach can bear. The cold infuſion of the bark is more agreeable and efficacious than the decoction †; and the decoction is generally preferable to the extract, which laſt is often ſo ill prepared as not to be depended upon. The

* Percival's Eſſays, vol. I. p. 111.

† Ibid. vol. I. p. 71.

The ſubſtance of the bark remaining after thoſe preparations have been made from it, has been found by experience to be poſſeſſed of virtues which are ſufficient to cure an intermittent. This affords a convincing proof that the bark is more effectual in ſubſtance than in any other form *.

Where the bark has been injudiciouſly ordered in too ſmall a quantity at firſt, and continued ſo as to become habitual and to loſe its efficacy, it is proper to intermit the remedy for ſome time; after which we may return to the uſe of it in a ſufficient doſe with ſucceſs.

Though the bark undoubtedly is in general the moſt powerful medicine employed in the cure of intermittents, yet there have been ſeveral caſes recorded, where, the bark having failed, bitters and aſtringents have been happily ſubſtituted in its place. Gentian, chamomile, galls †, alum, &c. have been uſed with good effect.

* Gregory's Lectures on the Practice.——Percival's Eſſays, p. 90.

† "The Academy ordered Lemery, Geoffroy, and other members, to make trial of it; and their report was, that galls did cure intermittents, though not ſo conſtantly as the bark." Lect on the Mat. Med. p. 290.

effect *. They ſhould be given in large doſes. Of gentian or chamomile, an ounce has been frequently taken during the intermiſſion of the diſtemper. Theſe remedies alſo act as tonics, and evidently tend to confirm the doctrine we have advanced concerning the nature and proximate cauſe of an intermitting fever. In general, however, they are by no means ſo uſeful as the peruvian bark. Bitters are more apt than the bark to produce purging; under which circumſtance the action of all tonic remedies will be moſt materially impaired. We prevent or remove this diſagreeable ſymptom by the proper uſe of opium.

In Remitting Fevers, both in thoſe of this climate and in the more malignant of hot countries, the bark is found the moſt efficacious remedy †. The cauſes of theſe diſorders, and the operation of the bark in producing a cure, may be explained upon principles ſimilar to thoſe already advanced on the ſubject of intermittents. In the ardent, the bilious, or the yellow

* Percival's Eſſays, vol. I. p. 71. — Monro Diſ. Mil. Hoſp. p. 200.

† Hi motus, et hæc certamina tanta,
Pulveris exigui jactu compreſſa, quieſcunt.
VIRGIL. Georg. iv.

yellow remittent fever, the danger is frequently ſo great, that there is not a moment to be loſt *. The weak trifling practice of a timid man may ſometimes be conſidered as juſtly chargeable with the patient's death. We are often neceſſitated in dangerous caſes to ſeize almoſt the firſt remiſſion, and to adminiſter the bark in as large quantity as the ſtomach can bear. The firſt favorable remiſſion being careleſsly overlooked, we ſhall frequently in vain expect another †. The unhappy termination of the diſeaſe will in ſuch caſe caſt a ſevere reflection on the practitioner's want of judgment. In cold climates, the remittents are ſeldom of that malignant putrid kind ‡, and therefore do not in general require ſuch very minute attention. In a ſhort time, they often change into the form of a regular intermittent, in which the bark may be more commodiouſly and ſucceſsfully adminiſtered. Bitters in theſe remittent fevers are occaſionally pre-

* "Nor are we to heſitate in giving the bark, upon account of the crudity and redneſs of the urine, which I have frequently obſerved to become paler, turn cloudy and let fall a ſediment by the uſe of this medicine." Cleghorn on the Diſeaſes of Minorca, p. 220.

† Ibid. p. 206.

‡ Obſervations on the Diſ. of the Army, p. 199.

preſcribed as tonics and antiſeptics, but will very rarely ſuperſede the uſe of the peruvian bark.

The prejudices, which have ſometimes prevailed againſt the bark in remitting and intermitting diſorders, are of ſuch a nature, that they do not deſerve a ſerious confutation. For ſince the happy diſcovery of this noble remedy, the ill conſequences of thoſe fevers have been leſs frequent as well as leſs conſiderable; and where they have occurred, they have generally been owing to the neglect or miſmanagement of the bark *. In the preſent times, thoſe diſorders more rarely leave ſuch extreme relaxation of the ſyſtem or fatal obſtructions of the viſcera.

Having

* "For the viſceral obſtructions, which ſucceeded to theſe fevers, were not to be imputed to the bark, but to a long continuance of the diſeaſe, and to frequent relapſes; againſt which there was no ſecurity, unleſs the patient took an ounce of the powder every ten or twelve days throughout the autumn." Obſervations on the Diſ. of the Army, p. 209.

Contrary to the opinion of Baglivi, Hoffman, and others, Mr. Cleghorn found the bark of the greateſt uſe in tertian fevers, even "while the firſt paſſages were full of vitious humors, and the bowels were inflamed or affected with inveterate obſtructions." Diſeaſes of Minorca, p. 221.

Having conſidered the uſe of the bark in intermittents and remittents, we go on to point out the uſe of it in Continued Fevers.—Theſe diſorders ariſe chiefly from cold, from contagion, or from ſome other noxious effluvia of animal bodies. The vapors, exhaled from ſtagnating waters and low marſhy countries, may increaſe their malignity, though it is acknowledged that ſuch vapors have a particular tendency in general to induce fevers of an intermitting or remitting nature. The other common remote cauſes, which I have enumerated in this ſection, are equally powerful in producing the continued fever. During the preſence of a contagious epidemic diſtemper, they ought as much as poſſible to be avoided. It is alſo abſurd for people needleſsly to expoſe themſelves to the action of contagion, or of any other putrid effluvia from animal bodies *. They who are diſcharging the neceſſary duties of humanity to their fellow-creatures in diſtreſs, and who are therefore unavoidably expoſed to the infectious vapor, ſhould be particularly anxious to ſhun every other remote

* Putrid effluvia, of a very malignant nature, are often generated in camps, hoſpitals, jails, or wherever men are crouded together in dirty, confined, and unventilated places.

cauſe that may render the body weaker and more ſubject to be affected with the diſeaſe.

All the remote cauſes of nervous and putrid fevers are evidently ſedative in their effects on the human body. Theſe fevers too begin with languor, laſſitude, chilline ſs, a weaker and more frequent pulſe than natural, which ſymptoms are followed by cutaneous ſpaſm and an obſtruction of perſpiration. The reaction of the heart and arteries is ſoon after produced *. If the patient is of a robuſt and irritable habit, the reaction will probably be ſtrong, denoted by a full quick pulſe and a great increaſe of heat. In this caſe, the diſorder proves a ſynochus, beginning with an inflammatory but ending in a nervous fever. If the patient be of a weak delicate conſtitution, the reaction is leſs con-

* Greg. Elem. of Practice, p. 29. "The proximate cauſes of the different genera of intermittents, remittents, and ſome continued fevers, ſeem to be analogous in ſome degree, from the ſimilarity of their ſymptoms, of their predi ſponent and occaſional cauſes, from their changing into one another and being cured by the ſame remedies. There ſeems likewiſe to be ſome analogy between the proximate cauſes of intermittents, and ſome diſeaſes where the nervous ſyſtem is much affected."

conſiderable, the contractions of the heart frequent and feeble, the heat moderate, and the fever properly denominated a nervous one. Theſe are dangerous diſtempers, and ſometimes as fatal even as the plague. For in moiſt and warm countries, the contagion is often highly ſeptic, and, acting as an aſſimilating ferment, produces a very great degree of putrefaction in the animal fluids.

During the inflammatory ſtage of continued fevers, the tonic effects of the bark are evidently pernicious. But when the vigor of the reaction is abated, when the inflammatory ſtate is removed, and when the ſymptoms of debility are prevalent either alone or in conjunction with thoſe of putreſcency, the bark becomes a neceſſary medicine *. Its tonic and antiſeptic virtues are then moſt urgently required, to obviate debility or to correct putrefaction. In putrid fevers, when putrid excretions, a diſſolved ſtate of the blood, hemorrhages or petechial ſpots occur, no practitioner can be ſuppoſed ignorant of the neceſſity of adminiſtering the

* Dr. De Hain and Dr. Haſenohrl were among the firſt who uſed the bark in large quantity in malignant fevers. Their practice has been followed with ſucceſs.

bark †. But when ſymptoms of great depreſſion of the vital powers prevail without thoſe of putreſcency, nothing is more common than to find the bark neglected, or preſcribed in ſuch ſmall quantities as to have no ſenſible effect *. Huxham, and ſome other practitioners, ſeem evidently to have fallen into this error.

But in the very beginning of a contagious fever, if the reaction be moderate without topical inflammation, and if remiſſions occur naturally, or be happily obtained by a judicious uſe of emetic tartar or James's powder, the peruvian bark, taken if neceſſary in conſiderable doſes, is excellently adapted for ſtrengthening the nervous ſyſtem, and ſtopping the progreſs of the diſeaſe.—Or if ſuch evident remiſſions occur towards the decline of a continued fever, and eſpecially if a cold fit precede the exacerbation, the free uſe of the bark, where it agrees with the ſtomach, is undoubtedly indicated ‡. In this caſe the remedy will tend

† Dr. Monro in his obſervations on the malignant fever ſtrongly recommends the bark, from the uſe of which he has often experienced good effects.

* Gregory's Clinical Lectures.

‡ Fordyce's Elem. of Practice, p. 150. "Irritability ariſing

tend to obviate the return of the paroxiſms, to haſten the patient's recovery, and to prevent a relapſe.—The bark is uſeful likewiſe to remove debility in the advanced ſtage of fevers, when they are not attended with much putreſcency or any remarkable remiſſions. In ſuch caſes four drams in twenty-four hours will, if the ſtomach can bear it, be a proper quantity of the medicine. But if that quantity occaſion ſickneſs, we muſt diminiſh the doſes accordingly, and adapt them with judgment to the circumſtances of the diſeaſe. It is adviſeable, particularly when the ſtomach ſeems diſordered, to begin with ſmall doſes at firſt and gradually to increaſe them. In ſuch critical junctures, the phyſician ſhould be active and obſerving; he ſhould be minutely attentive to ſeize the happy moments of relief; and, if his patient unfortunately cannot reap all the advantages which may uſually be obtained from medicine, he will at leaſt give him that aſſiſtance, which, conſidering the morbid delicacy of his conſtitution, is beſt ſuited to the removal of his complaint.

ariſing towards the end is to be taken off—by cortex peruvianus, if there are remarkable remiſſions or a general freedom in the ſecretory organs."

I paſs on to the abuſe of the bark in Topical Inflammations. It is obvious at firſt ſight that a remedy, ſo powerfully tonic, cannot be employed without the greateſt impropriety in diſorders, where the inflammatory ſtate prevails, and where the action of the arterial ſyſtem is morbidly increaſed. In the topical phlegmonic inflammation, in the phrenſy, in the peripneumony, in the pleuriſy, &c. the uſe of the bark can in general have no place. Yet there are exceptions and reſtrictions to this general rule, ſome of which I ſhall endeavor to point out.

When an external inflammation is ſuppurating, the bark is ſerviceable in promoting the cure. If there be a common ulcer, or one even of the ſcrophulous kind, the bark often produces a favorable inflammation on its ſurface, a diſcharge of good matter, and an evident diſpoſition to heal. If an external inflammation terminate in a gangrene of the part, the bark is a remedy of the firſt importance. It muſt be given in doſes as large and as frequently repeated as the ſtomach can bear. By increaſing the tone of the vaſcular and nervous ſyſtems, it favors the riſe and progreſs of inflam-

inflammation round the mortified part, and promotes its ſeparation with much ſucceſs.

If an inflammation of the coats of the eye or of the eye-lid ſubſiſts from topical laxity attended with general debility of the ſyſtem, and there be no ſigns of greater impetus of the blood in the veſſels of the part affected, bark, bitters, ſteel mineral waters, cold bathing, frequent gentle exerciſe in the cool air, a mild reſtorative diet, collyriums of white vitriol and of the ſugar of lead or the extract of Goulard, afford the beſt means of cure *. If the inflammation proceed from a ſcrophulous cauſe, the ſame treatment is well adapted to the nature of the complaint. How much ſuperior is ſuch a practice to the abſurd method of confining the patient to his room, of forbidding moderate exerciſe in the open air, and preſcribing the uſe of habitual purgatives, along with general blood-letting, till the tone of the ſyſtem be deſtroyed, and univerſal relaxation induced. This unhappy ſtate is indicated by weakneſs of the ſtomach, indigeſtion, loſs of appetite, paleneſs, emaciation and the common marks of a ruined conſtitution.—If the inflammation

* Gregory's Elem. of Practice, p. 132.

mation of the eye be periodical, and accompanied with an intermitting fever, we neceſſarily have recourſe to the peruvian bark, as the principal means of relief. In ſuch caſes it will often remove the cauſe and obviate the return of the complaint *.

Since the diſcovery of the ulcerous eryſipelatous ſore throat, the pure inflammatory one has often been miſtaken for it, and conſequently the bark has often been imprudently preſcribed. In the eryſipelatous ſore throat, which likewiſe is often miſtaken for the inflammatory, a very eſſential part of the cure conſiſts in the proper uſe of the bark, bitters, mineral acids, and other antiſeptics, taken as internal remedies or applied topically to the inflamed part. The fever is well known to be of the putrid malignant kind, and attended with the greateſt proſtration of ſtrength. If inflammatory ſymptoms prevail at the beginning of the diſeaſe, the bark is not to be exhibited internally, till thoſe be removed. Afterwards it may be given with the greateſt ſucceſs.

* Sauvages Noſol. Method. de Ophthalmia febricoſa. " Dolor atrox oculi, periodicus, cum lachrymatione, ſiti urgente, pulſu celeri ac forti & urinis intenſe rubris ac turbidis, ſine rubore, ope kinkinæ ſanatus." vol. II. p. 71.

ſucceſs. Children often cannot be prevailed upon to take it in ſufficient quantity; a circumſtance much to be regretted. "We are often reduced to the moſt diſtreſſing perplexity from the difficulty of perſuading, or the danger and impoſſibility of forcing them to uſe thoſe means which are neceſſary for their relief *." But in all caſes, where it can be done with ſufficient eaſe and ſafety, the bark ſhould not only be taken into the ſtomach, but copiouſly uſed in gliſters, gargles, and injections into the throat. The powder in any form for internal uſe, is to be conſidered as preferable to every other preparation of the bark.

If, after the inflammation of the liver, the ſymptoms of ſuppuration occur, the bark is an excellent remedy †. Such an unfortunate termination is diſcoverable by the abſence of fixt pain; by a ſenſe of uneaſineſs, which the patient feels when laid on the left ſide; by a pain in the right ſhoulder, with a difficulty of breathing; by great debility, ſickneſs, want of appetite and diſturbed ſleep; by a frequent

* Percival's Eſſays, vol I. p. 377.

† Fordyce's Elem. of Pract. p. 260.

quent pulſe, irregular ſhiverings, and ſometimes even an evident fluctuation of the matter. The bark in ſuch caſes tends to moderate the febrile ſymptoms, to promote a favorable ſuppuration, and to heal the abceſs.

In the inflammation of the womb, which I have before mentioned as being often dangerous, the bark, when a mortification has begun, is the moſt efficacious remedy. It ſhould be given in as large quantity as the ſtomach can bear, and not trifled with in thoſe ſmall doſes in which it is too frequently uſed. Six drams or an ounce may be taken by the mouth in the ſpace of twenty-four hours.

In the acute inflammatory rheumatiſm, the bark, in conſequence of its tendency to increaſe the tone of the arterial ſyſtem, is generally eſteemed of pernicious effect. But there are many caſes of chronic rheumatiſm, which are attended with great weakneſs and irritability of the nervous ſyſtem. In ſuch conſtitutions the diſorder ſeems probably to ſubſiſt, from a want of tone in the veſſels of the part affected. The pulſe is often weak and ſmall, without any perceptible hardneſs, and the rheumatic joint feels

feels cold and dry, when the reſt of the body is warm and moiſt. In ſuch caſes, which are frequently complicated with weakneſs of the alimentary canal and hypochondriac ſymptoms, the bark is a well-choſen remedy, and employed with ſucceſs. Bitters, cool air, gentle exerciſe on horſeback, cold bathing *, frictions and warm clothing, are alſo curative means found by experience to be highly ſerviceable in the ſame complaint. Thoſe remedies all tend to increaſe the tone of the ſyſtem in general, and to obviate the topical debility of the affected part.—In the rheumatiſm, when the pain returns periodically, the bark is often employed with ſingular ſucceſs †.

* Obſervations on the Diſ. of the Army, p. 160. "After the patient has continued ſome time in this courſe, his recovery will be quickened by the uſe of the cold bath or the bark; and to thoſe who can afford it, riding is a ſpecific remedy."—Monro's Diſ. of Mil. Hoſp. p. 147. "Sometimes the cold bath removed pains which had not yielded to internal medicines."

† Sauvages Noſol. Method. vol. II. p. 32. de Rheumatiſmo Febricoſo. "Cura Mortoni in vehementi paroxyſmo, ubi deliquium animi imminebat, fuit 1° phlebotomia larga: 2° poſt ſex horas vomitorium: 3° kinkina cum laudano."

In the regular gout where the inflammation of the extremity runs high, and in the anomalous gout where a topical inflammation of ſome internal organ is produced, the bark is obviouſly improper. But in that ſpecies of the gout in which the ſyſtem is debilitated, and the diſeaſe by time become irregular, producing ſpaſmodic affections of internal parts without inflammation, a cautious uſe of the bark is undoubtedly to be adviſed. The remedy however ſhould not be exhibited in too large a quantity, nor the uſe of it continued too long together without proper intermiſſions *. — The ſame remarks are applicable to bitters, the tonic power of which may ſometimes be required in the gout. — The preparations of ſteel may for the ſame purpoſe be ſafely and freely employed.—I ſpeak here with ſome reſerve on the uſe of bitters and the peruvian bark; for it is meant to recommend only the prudent exhibition of them, with a view to ſupport the vigor of the whole ſyſtem, and particularly of the alimentary tube. We ſhould at the ſame time be cautious to avoid the too liberal and long uninterrupted uſe of thoſe medicines. Such injudicious practice has however been too common

* Gregory's Elem. of Pract. p. 198.

mon. The Duke of Portland's powder conſiſts chiefly of bitters. That remedy was thought to be a ſpecific in the gout. Taken with a ſteady perſeverance for a conſiderable length of time, it has indeed prevented the returns of the diſeaſe, but at the expence of irrecoverably deſtroying the tone of the whole ſyſtem. Accordingly it has been found by experience, that the patients who were thus freed from the gout by the Duke of Portland's powder, have been frequently carried off ſoon after by a ſudden death. Dr. Cullen mentions twelve or fourteen caſes, in all of which, after ſuch treatment, the patients died in about the ſpace of one or two years of an apoplexy or ſome other mortal diſeaſe *. Facts of this nature ſhould be a warning to thoſe perſons, who ſeem obſtinately fond in this complaint of quacking with themſelves, though not without an evident hazard of their lives. Even tanſy-tea, of which ſome gentlemen have been ſo laviſh of their praiſe, may, if

* Lect. on Mat. Med. p. 281. "I may venture to ſay, that ninety of a hundred who have taken this remedy, in a year or two after have been carried off by apoplexy, or ſome other mortal diſeaſe. In Scotland, only 12 or 14 perſons have taken this powder, and all have done it with the conſequences I mention."

if improperly uſed, prove at laſt productive of unhappy effects.

In Eruptive Diſeaſes, the bark is often imprudently neglected, as well as injudiciouſly employed.

The eryſipelas is frequently to be conſidered rather as a local inflammation of the teguments, than as an eruptive diſorder. Whether or no it ſhould be at all diſtinguiſhed by this latter appellation, is matter of doubt. For the ſlighteſt compariſon between the eryſipelas and the ſmall-pox will clearly prove that they cannot be comprehended under the ſame natural order of diſeaſes. The eryſipelas wants many of the moſt eſſential circumſtances to characterize it an eruptive diſtemper. Sometimes the inflammation is not preceded by a fever, and when a fever does precede it, the time of the appearance of the inflammation is very irregular.—If the eryſipelas occur as a local inflammation, attended with increaſed action of the vaſcular ſyſtem and an inflammatory fever, bleeding is neceſſary, and the bark is pernicious. But if in this caſe the eryſipelas ſhould afterwards tend to ſuppuration or gangrene, the bark will often be uſeful.

uſeful.—When the eryſipelas appears under that form in which it is frequently conſidered as an eruptive complaint, blood-letting, if the attendant fever be inflammatory and the pulſe ſtrong and hard, is found, when cautiouſly uſed, to be undoubtedly ſerviceable. I need not ſay that the bark in this diſeaſe would be hurtful. But if the eryſipelas ſupervene on a nervous fever or towards the decline of a ſynochus, if the depreſſion of ſtrength be great, if the pulſe be weak and frequent, if the ſyſtem be irritable and the mind dejected, bark, bliſters, and ſtimulants are neceſſary remedies to ſupport the tone of the ſyſtem, to remove irritability, and to obviate the putreſcency of the fluids *. In this caſe, blood-letting, eſpecially in large cities where the air is impure, and where the conſtitution of the inhabitants is weaker and tends more towards putrefaction, has undoubtedly rendered the diſeaſe often fatal, when, by the contrary practice, it might have been happily removed.

In the plague, the miliary fever, the nettle-raſh, the thruſh, and ſome other eruptive diſorders, in which the attendant fever is of the nervous kind or a ſynochus, the uſe of the bark

* Gregory's Elem. of Practice, p. 100.

bark is regulated by thoſe general fundamental principles, which have been advanced relative to its uſe in fevers. In ſuch eruptive complaints, it is often extremely beneficial. Sometimes it is indicated to ſtop the return of paroxiſms, when the fever evidently puts on a remittent or an intermittent form. Sometimes irritability and proſtration of ſtrength require its tonic virtue. At other times, ſymptoms of putreſcency of the fluids render it indiſpenſably neceſſary. — In the ſmall-pox, eſpecially when of the confluent kind, the bark is often well fitted to anſwer ſimilar indications *. For debility and putrefaction often occur in the higheſt degree. During the inflammatory ſtate of the diſeaſe, the bark is very improperly adminiſtered as a medicine. But in the ſecond and third ſtages, no remedy is more efficacious in diminiſhing the ſymptoms of the fever, in promoting ſuppuration, in obviating putrefaction, and in ſupporting the tone of the ſyſtem, along with a neceſſary degree of cutaneous inflammation.

In

* "The malignant kind required the uſe of acids and the bark, which laſt could often only be adminiſtered by way of clyſter, as the ſick could not ſwallow it: In ſhort, we treated the patients much in the ſame way as in the malignant fever, allowance being made for the preſent circumſtances." Monro's Diſ. of the Mil. Hoſp. p. 244.

In active hemorrhages, the bark is improper. Of the great utility of that remedy in the ſymptomatic hemorrhages attendant on putrid diſorders, I have already ſpoken. It remains only to obſerve here, that in the uterine hemorrhage, not connected with plethora, but ariſing from relaxation of the general ſyſtem and particularly of the uterine veſſels, the bark, bitters, alum, ſteel-mineral waters, cool air, and cold bathing, are highly ſerviceable. In this complaint, bleeding and other evacuations are often pernicious, as they weaken the ſyſtem and increaſe the tenuity of the blood.—By the uſe of the bark, aſtringents, and cool air, we ſometimes prevent in pregnant women floodings and abortion, when they proceed from weakneſs and relaxation. With this view too, thoſe ſtrengthening remedies are often employed with great advantage during the intervals of pregnancy, to which in general may be added in ſuch caſes moderate exerciſe and cold bathing, adapted prudently to the patient's ſtrength and to the nature of the complaint.

I proceed to ſpeak of the abuſe of the bark and other ſtrengtheners in ſome Chronic Diſorders. In conſequence of the neglect and im-

prudent uſe of theſe remedies in ſuch complaints, we need not heſitate to affirm that many conſtitutions are moſt materially injured.

In the palſy, the ſyncope, convulſions, epilepſy, palpitation of the heart, immoderate diſcharges of urine, hyſteric fits, &c. when theſe diſorders are accompanied with weakneſs and relaxation, the bark and other ſtrengthening remedies are uſeful. They tend to remove ſuch complaints in conſequence of their power of increaſing the tone of the ſyſtem. The practitioner will make a judicious choice of thoſe tonics which are peculiarly indicated. In the epileptic fits, the metallic preparation *, formed by the union of copper with the ammoniacal ſalt †, has of late been found in ſome caſes of great ſervice ‡.—If epilepſy, hyſterics, ſyncope, &c. be

* Cuprum ammoniacale.

† Les alkalis fixes & volatils diſſolvent facilement le cuivre, ou directement ou encore mieux lorſqu'il a d'abord ete diſſous par un acide. Dict. de Chymie.

‡ Gregory's Clinical Lectures.

"This preparation is to be conſidered as a combination of copper with an ammoniacal ſalt. This preparation may be obtained in chryſtals in the following manner, &c. It has all the advantages of the other preparations of Boyle, and never

be ſtrictly periodical, the bark ſometimes is ſingularly efficacious †.

In the ſpaſmodic aſthma and in the hooping cough, when plethora does not prevail, the bark is often uſeful. Given in the firſt, it diminiſhes the irritability of the lungs, promotes the natural criſis by expectoration, and procures a longer intermiſſion. In the hooping cough it tends to mitigate the violence and to ſhorten the duration of the diſeaſe. Other tonics, with change of air, may ſometimes be found requiſite.—If, after the removal of a dyſentery, the bowels be conſiderably relaxed and a diarrhæa remain, we moſt ſucceſsfully attempt the cure by the uſe of tonics and aſtringents.—In the rickets

never has any of the copper united with the muriatic acid. Wherever copper is introduced in this form, it acts as an aſtringent, and deſtroys the mobility of the nervous power. It is alſo antiſpaſmodic, and has been preſcribed in the epilepſy, as I myſelf have ſometimes obſerved, with appearance of ſucceſs; where its action would ſeem to depend on giving a tenſion to the ſyſtem, and deſtroying that irritability on which epilepſy ſeems to depend." Lect. on the Mat. Med. p. 186.

† Vid. Sauvages Noſol. Method. de epilepſia febricoſa, tom. I. p. 584.—De hyſteria febricoſa, tom. I. p. 590.—De ſyncope febricoſa, tom I. p. 813.

and in ſcrophulous complaints, attended with great relaxation of the general habit, the good effects of the bark, of ſteel-mineral waters, and of cold bathing, are ſufficiently aſcertained. The internal uſe of ſea-water in ſcrophulous caſes of that nature, ſhould be cautiouſly avoided; for ſea-water, in conſequence of its purgative quality, is capable of powerfully debilitating the ſyſtem and of increaſing the diſorder.

In weakneſſes of the ſtomach and in hypochondriac affections, occurring in relaxed conſtitutions, tonics are undoubtedly requiſite, ſuch as bark, bitters, and cold bathing. But if in thoſe complaints there be a rigidity of the fibres, theſe remedies are often greatly abuſed. For though in ſuch caſes want of appetite, acidity, indigeſtion, flatulency, pains of the ſtomach and bowels, coſtiveneſs, and dejection of ſpirits with falſe imagination, may occur, theſe ſymptoms will hardly be relieved by medicines which increaſe the cauſe of them. Yet in thoſe ſpecies of the hypochondriac complaint and weakneſs of the ſtomach where the animal fibres are too rigid, we frequently ſee the bark, the cold bath, and ſeveral other tonics injudiciouſly preſcribed. At the ſame time it is readily acknowledged, that, when

when in ſuch diſeaſes a relaxation of the animal fibres takes place, thoſe remedies are highly ſerviceable. The practitioner therefore ſhould be able accurately to diſtinguiſh the relaxed from the rigid fibre *. For on that diſtinction reſts materially the ſucceſs of his practice. The melancholic temperament with black hair and a dark complexion, is moſt ſubject to rigidity †. The ſanguine temperament is much diſpoſed to become relaxed and irritable. But it is no uncommon thing to find the melancholic temperament relaxed, and the ſanguine temperament too rigid. When rigidity is a cauſe of the diſeaſe, warm bathing and relaxants have the beſt effect. Hence the great utility of Bath

* Vid Aphor. 27, 34.—Van Swieten Comment.

† Lect. on the Mat. Med. p. 18. "*Melancholic habit.* Here greater rigidity of ſolids occurs, diſcoverable by the hardneſs and criſpature of the hair; ſmall proportion of the fluids, hence dryneſs and leanneſs; ſmaller arteries, hence pale colour; venous plethora, hence turgency of theſe, and lividity; ſenſibility, frequently exquiſite, but with great accuracy; moderate irritability, with remarkable tenacity of impreſſions; ſteadineſs in action and ſlowneſs of motion, with great ſtrength; for exceſs of this conſtitution in maniacs gives the moſt extraordinary inſtance of human ſtrength I know. This temperament is moſt diſtinctly marked in old age and in males, &c".

Bath and Buxton waters, employed internally and externally in this ſpecies of the hypochondriac affection, though frequently thoſe waters are injurious, where the diſorder ariſes from a morbid relaxation of the ſyſtem. This remark is well founded on facts, the knowledge of which is of great importance to the ſucceſsful treatment of thoſe complaints †.

Here I ſhall conclude theſe obſervations; not becauſe the ſubject is exhauſted, but becauſe I have given, all that I intended, ſome examples of the abuſe of medicine. There yet remain many diſtinct claſſes of remedies, the abuſe of which could not have been included within the narrow limits of this treatiſe.

I have avoided (with perhaps too much caution) that part of the abuſe of medicine, ariſing from inability to aſcertain and diſtinguiſh the different ſpecies of diſorders, which are not only ſo numerous in themſelves, but often at their beginning ſo imperfectly formed, and even in their progreſs attended with ſuch ſimilar combination of ſymptoms, that the diſtinction of them

† Cullen's Clinical Lectures.—Gregory's Lectures on the Practice.

them is rendered truly difficult. In all ambiguous cases, it will be by no means easy for any one to form proper indications and to ascertain the best methods of cure, if his understanding be not clear and comprehensive, and able both judiciously to acquire and accurately to retain the just principles of his art. The learned Dr. Percival has well observed, "that without the "concurring assistance of our judgment and "understanding, neither reading nor practice "will be found of any other avail, than to "perplex us with uncertainty, and to lead us "into error *.

I have likewise omitted the abuse of Surgery and of Midwifery †. Indeed one hardly dare discuss

* Percival's Essays, vol. I. p. 43.

"An undistinguishing credulity is in no science so absurd and dangerous as in physic. Here every fact which is advanced should be examined with accuracy, and admitted with caution. The histories of diseases are frequently the records of falsehood, at least they contain such a mixture of error and truth, as requires the exertion of reason, and an extensive knowledge of the animal œconomy, to separate one from the other." Ibid. p. 44.

† Boerhaave in his Aphorisms on the Practice of Medicine includes the practice of midwifery and of surgery. That great man taught and recommended to others an universal know-

diſcuſs thoſe ſubjects freely. So numerous and unfortunate are the errors of practice which have ariſen from ignorance, raſhneſs and timidity, that we ſhould find an ample field for cenſure †. The facts, here alluded to, are committed in open day and in common life, but they are often artfully concealed, and conſidered as

knowledge in the art of medicine. He knew and was aware of the great complications of diſorders which occur. He knew too how difficult it was to practice with ſucceſs in any one branch of medicine without a competent knowledge of the others. His Commentator, the Baron Van Swieten, proves fully the juſtneſs of the obſervation.

† Vid. Dr. Burton's Eſſay on Midwifery, p. 10. "As the preſervation of our ſpecies ſo much depended upon the perfect underſtanding of this branch, both in bringing children alive into the world, and in preſerving the lives of the mothers; and as the frequency of the (almoſt innumerable) evils which daily befel the women and their infants during labor, by the ignorance and miſmanagement of the female midwives, firſt put men upon applying their ſtudy and aſſiſtance; ſo they yet cry aloud for our further aid, becauſe the ſame reaſons (I am ſorry to ſay it) are ſtill ſubſiſting; for many of the male practitioners are no leſs inexcuſable than the women.—Theſe ſort of men conſider midwifery rather as an art only, than a ſcience; whereas it may be properly ſaid to be compoſed of both: Of the firſt, as to the manner of operation; of the laſt, as the mothers are ſubject to ſo many diſorders and complaints, that frequently attend their pregnancy and lying in, which call out for *medical ſkill*, rather than *manual operation*."

as the reſult of experience, of wiſdom, and of beneficence. *Art could do no more*, is language too often uſed to conceal the greateſt abuſes of the profeſſion, even in thoſe caſes where, by the judicious practitioner, life might eaſily have been preſerved.

Theſe and many other abuſes might have been introduced among the obſervations made on this copious and intereſting ſubject; a ſubject indeed well deſerving to be diſcuſſed by an abler pen.

It is obvious that there are two principal ſources of the abuſe of medicine. One ariſes from ignorance, either in conſequence of neglect or from the want of common underſtanding. The other is inſeparable from the limitation of the powers of the human mind. The firſt, ſtrictly ſpeaking, has been the chief or rather the ſole object of theſe obſervations.—Time and induſtry have greatly diminiſhed the force of that current of evil, which took its riſe from the limited capacity of the human underſtanding. The bad effects, which ſprung from that ſource, were doubtleſs unavoidable. Mankind have never yet been known to exiſt without a practice of phyſic of

one ſort or another. If they had not a regular faculty, they had quacks, medical prieſts, or Æſculapian gods. Since indeed nature of herſelf is capable of ſucceſsfully removing ſuch a variety of diſorders, many phyſicians in extenſive practice, who were often conſulted in favorable caſes, muſt, though they were defective in point of medical knowledge, have acquired a very conſiderable reputation. We may therefore think ourſelves happy that we have got over the rude ſtate of medicine, and wiſely eſtabliſhed the practice of this moſt noble art upon the firmeſt baſis.

It is the firſt ſource of error which we ſhould principally labor to avoid. When ſuch ſerious objects as health and life are at ſtake, every man, for his own private advantage, as well as for the public good, ſhould abandon all the ſecondary conſiderations of intereſt; he ſhould be cautious to avoid a ſervile proſtitution of praiſe; but laudably ambitious to encourage men of genius and medical erudition. By this means, worth and induſtry would be juſtly rewarded; the ſcience of medicine cultivated to the greateſt advantage; improvements quickly made; and diſeaſes moſt ſucceſsfully treated. We ought to obſerve in juſtice

juſtice to the preſent age, that the ſtudy of medicine was never purſued on ſo noble and enlarged a plan. Our own iſland is indiſputably adorned with the greateſt ſeminary of medical learning, that is recorded in the annals of time. The active and liberal ſpirit of inquiry, which now prevails through the literary world, affords the moſt pleaſing proſpect, that the ſcience of medicine, as well as every other branch of knowledge, will neceſſarily make a rapid progreſs towards perfection.

FINIS.

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